CAMPUS ALBERTA PLANNING FRAMEWORK 2010

Profiling Alberta's Advanced Education System

Government of Alberta
Advanced Education and Technology

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MESSAGE FROM THE MINISTER

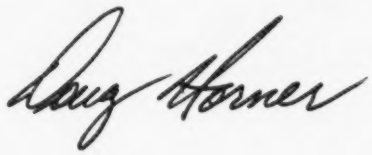
Since the 2009 release of the Alberta Access Planning Framework, Alberta has faced one of the most challenging global recessions in history. Over the past year, we have worked to maintain accessible, high quality learning opportunities for Albertans in the face of our economic realities, at a time when labour market opportunities were lower and demand for post-secondary education was high.

In the face of these challenges, institutions demonstrated flexibility and responsiveness to our changing context. Our collaborative work progressed, with the Campus Alberta Planning System renewed with more tools and resources to support our efforts at integrated planning. Our work on system alignment and coordination continued, creating five new Alberta Innovates agencies to support a dynamic and accessible research and innovation system. These are only a few of our many achievements over the past year.

Providing the context for these achievements, this year the Alberta Access Planning Framework has been renamed the Campus Alberta Planning Framework. This name change reflects our ongoing efforts to provide our system partners with a greater breadth of information to support planning and priority setting, and to more closely integrate multiple planning processes. It reflects the need to examine our work holistically in order to see a complete picture of our advanced learning and innovation systems, the synergies between them, and the multiple links between the world around us and post-secondary education. Demographic shifts, economic realities, educational outcomes of the youngest Albertans, global demand for post-secondary education – these all affect our Alberta context and require consideration in our decision-making.

Campus Alberta Planning Framework 2010 is a profile of Campus Alberta. The document begins with a view of our current demographic and economic context, noting key upcoming trends. It then delves into the specifics of our advanced learning system, examining enrolment trends and student flows across program areas and regions of Alberta, including student movements within and outside the province. Based on these trends, demand and capacity are examined, followed by a look at the linkages between research, innovation, and post-secondary education – links that are critical to maintain and build if we are to succeed in the knowledge-driven economy.

In its previous two iterations, the Alberta Access Planning Framework provided a common foundation for dialogue among decision-makers. I expect that the Campus Alberta Planning Framework will prove no different. Thank you for your ongoing collaboration and support. Working together, I am confident that we will achieve our vision of a vibrant Alberta that prospers through innovation and lifelong learning.



Doug Horner
Deputy Premier and Minister of Advanced Education and Technology

EXECUTIVE SUMMARY

The following key challenges and opportunities are evident from this year's profile of Campus Alberta.

Challenge: Economic Uncertainty

Alberta has felt the impact of the global recession and is beginning to recover. The province's rate of recovery is still uncertain, and will continue to be influenced by global forces. As the baby boom generation ages and retires, government will be increasingly challenged to maintain the level and quality of social programs in the face of rising dependency ratios and economic uncertainty. As the population of seniors gradually outnumbers that of working-age Albertans, employers will be challenged to find the needed number of workers with the appropriate skills and competencies.

Opportunity: Collaboration

The need to maintain flexibility and responsiveness to a changing social, demographic, and economic context is vital if Campus Alberta is to maintain the levels of access and quality Albertans have come to expect. Collaboration is key to creating more opportunities for learners and enhancing long-term sustainability. Sharing information and best practices will enhance system coordination. More coordinated system planning, including the integration of the Institutional Access Plan (IAP) and institutional business planning processes, will require quality data, reliable information, and open dialogue.

Challenge: Access

While Alberta's overall rate of population growth is expected to decline, accelerated population growth is expected in groups that are traditionally under-represented in the advanced learning system. These groups experience lower levels of educational attainment and labour market participation than the general Alberta population and face unique barriers to accessing post-secondary education (PSE) that go beyond the creation of student spaces. These include rural and Aboriginal Albertans, people with disabilities, and people from lower socio-economic backgrounds.

In the years to come, Alberta will face access pressures that will increasingly be about enabling Albertans to pursue educational opportunities than creating seat spaces for them to do so. There is a need to focus on different ways of creating access – different conceptions of accessibility, and of capacity within the system. A balanced approach to meeting access needs across a broad range of programming options is required.

Opportunity: Leveraging Investment

Alberta's post-secondary system has benefitted from significant public investment over recent years and is well-positioned to meet system-level demand for post-secondary education over the medium-term. There is a need to explore opportunities to create efficiencies within the system and seek synergies among post-secondary providers and government in order to maximize the use of available resources.

Challenge: Declining Youth Population

Consistent with demographic trends across Canada, Alberta's population is aging. Every region of the province will see increases in the median age of its population over the coming years. As the economy recovers and labour market opportunities increase, Alberta's advanced education system may be challenged to maintain or increase post-secondary

enrolments at the pace of recent years.

Opportunity: Student Mobility – Building on Alberta's Strengths

Learners are attracted to Alberta because of its high quality educational institutions, strong economy, and safe communities. The province has an active network of prior learning and recognition practices and one of the most well-established and utilized transfer systems in Canada to support learners in reaching their goals. Increasing pathways among learning providers and programs, and between learning and the labour market, is vital if the post-secondary system is to compensate for the expected slower population growth rates in youth cohorts, increase levels of educational attainment, and encourage learners to continue to choose Alberta.

Challenge: Meeting Labour Market Needs

Even during the recent economic downturn, labour shortages were evident in certain sectors. With increasing retirements, population aging, and lower levels of Albertans pursuing post-secondary education compared to other provinces, Alberta will be reliant on in-migration for population and labour force maintenance. Interprovincial migration to Alberta is strongly tied to its relative economic position vis-à-vis the rest of Canada. As Alberta enters a period of more stable economic growth, interprovincial in-migration is unlikely to continue at the pace of recent years.

Immigration to Alberta is important for the province's ability to take advantage of economic opportunities and create new ones. Immigrants to Alberta are highly educated, but often find themselves employed below their skills and ability, or face barriers relating to their English-language skills and/or recognition of their prior learning. While looking to the outside as a source for skills and talent is necessary, finding ways for people already in the province to reach their potential is both a means of keeping people in Alberta and attracting new people to the province.

Challenge: Increasing Enrolment in Key Graduate and Professional Programs

In-migration will continue to be the key source for Alberta's future population and labour force growth. Significant proportions of Alberta's graduate students come from outside the province. The need to attract and retain international students is essential, considering their proportion of enrolment in Master's and Doctoral degree programs – programs that foster our future innovators, researchers, and thinkers. The challenge in increasing enrolment in key graduate and professional programs is two-fold: encouraging Albertans to pursue higher levels of educational attainment within the province, and to create a vibrant intellectual and cultural environment to draw top international talent to Alberta.

Opportunity: Increasing Post-secondary Participation

Tremendous potential exists to increase Albertans' participation in advanced learning and increase educational attainment levels of populations that are traditionally under-represented in post-secondary education. As Alberta's overall population ages and population growth slows, this will be increasingly important if the province is to sustain economic growth and vibrant communities. The younger age structure and faster population growth rate of these groups makes the potential impact of increased educational attainment and post-secondary participation even greater.

Key Policy Directions

The following identifies the key policy directions necessary to respond to the opportunities and challenges noted in the previous section.

Collaboration and Campus Alberta

- The success of Campus Alberta requires higher levels of collaboration. There is a need for Alberta's post-secondary system stakeholders to work together in the spirit of Campus Alberta to meet the needs of learners and the labour market.
- The *Roles and Mandates Policy Framework for Alberta's Publicly Funded Advanced Education System* established a strong foundation and positioned the system to compete globally.
- Building on this foundation, there is a need to create greater fluency and alignment across Campus Alberta.
- Information sharing has the potential to illuminate knowledge and access gaps and highlight best practices for the benefit of Albertans, but is currently sporadic and inconsistent.
- Opportunities to streamline multiple planning and administrative processes to create efficiencies within the system are being explored by both institutions and government through mechanisms such as the Campus Alberta Administration (CAA) and Campus Alberta Strategic Directions Committee (CASDC).
- There is a need to build and reinforce collaborative arrangements that maximize the use of existing capacity and meet learner needs.

Quality

- Maintaining a quality advanced learning system in the face of demographic and fiscal pressures will be integral to enabling the province to compete at a global level.
- Part of a quality system is ensuring that learners have access to a balanced mix of programs, which are suited to meet both short- and long-term learner and labour market needs.
- A critical component of the Quality Assurance Framework will be an articulation of the key outcomes for Campus Alberta over the next decade. These outcomes will support Alberta's branding efforts and help secure top talent within Canada and globally.

Increased Post-secondary Participation of Under-represented Groups

- Experiencing both population aging and a slowing population growth rate, increasing the post-secondary participation rate of under-represented learners is integral to Alberta's prosperity and the health and vibrancy of its communities.
- It is important to strengthen strategies that support the increased post-secondary participation of learners traditionally under-represented in Alberta's advanced education system.
- Efforts will include a focus on Albertans who live with a disability, have low literacy skills, lack fluency in English, are socio-economically disadvantaged, identify as Aboriginal, or who may reside in rural communities with limited access to post-secondary learning.
- A significant proportion of Albertans have lower levels of literacy, essential skills, or educational attainment. Ensuring that Campus Alberta continues to provide a breadth of educational opportunities – including foundational learning – is essential for Alberta's health and prosperity.

Increasing Access in Key Program Areas

- In its 2009-19 forecast, Alberta Employment and Immigration (AEI) predicts the greatest proportion of labour

market shortages to be in the following program bands:

- *Trades and Technology*
- *Health Sciences*
- *Business*
- *Physical, Natural, and Applied Sciences*

- Program areas with the greatest labour market demand also have the greatest learner demand, with the number of turn-aways highest in the Health Sciences, Trades and Technology, and Physical, Natural, and Applied Sciences program bands.
- The forecast recognizes that a significant proportion of the labour market shortages in the Business program band is likely to be filled by graduates from the Languages, Arts, Social Sciences, and Humanities program band.
- While increasing access in these priority program areas is important, Alberta does not have the population base to meet projected labour market demand in fields requiring post-secondary education.
- Alberta will continue to need graduates with the critical thinking, problem-solving, creativity, and linguistic abilities necessary to address the questions and challenges that will arise in the knowledge-driven economy.

Increased Attraction and Retention of Learners in Graduate Programs

- Graduate students play a key role in supporting Alberta's advanced learning and research and innovation systems. They are our future researchers, innovators, and faculty members.
- Within priority program areas in particular, a focus on increased participation in graduate-level studies is warranted.
- Increased participation in graduate-level studies in key areas will respond to labour market shortages and contribute to Alberta's success in the knowledge-driven economy.
- Encouraging Albertans to pursue graduate-level studies has the potential to strengthen linkages between Campus Alberta and the province's research and innovation systems.
- International students comprise a significant proportion of Alberta's graduate-level students. Increasing the attraction of international students to the province and retaining them upon graduation will be integral to the province's success.

Implementation of Timely Practices that Recognize Prior Learning

- The recognition of prior learning is paramount for learners seeking to complete their education in a timely and cost-efficient manner.
- Increased collaboration, exploration of best practices, and improved awareness of existing supports among the public and employers is needed.
- Recognition of prior learning is of particular importance if Alberta is to attract and retain inter-provincial migrants and immigrants, who largely work below their knowledge and skill level.
- If it is to succeed in the knowledge-driven economy, Alberta cannot afford to have skilled people working below their ability.

Improving Data and Information Systems

- Reliable data and information is the foundation for good decision-making.
- Sound policy-making must be based on data and information that are reflective of the varied educational choices open to Albertans. An accurate picture of access and demand must involve all learners, educational providers, and relevant stakeholders.

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INTRODUCTION

The *Roles and Mandates Policy Framework for Alberta's Publicly Funded Advanced Education System* identifies the Alberta Access Planning Framework (AAPF) as a key planning instrument within Campus Alberta. This year, the AAPF has been renamed the **Campus Alberta Planning Framework** – the CAPF. This name change reflects the document's incorporation of a greater breadth of information, providing a more comprehensive contextual piece to support institutional environmental scanning and system planning across Campus Alberta. It signals a focus on collaboration and system-wide planning, and the alignment of our IAP and business planning processes to help ensure that our system is supportive of and responsive to the needs of learners, our economy, and society.

Post-secondary enrolment is dependent on a variety of factors, from the macro to the micro levels. These include demographic trends, high school transition rates, socio-economic status, and the state of the economy, to name a few. These inputs are fluid, requiring consideration of how both today and tomorrow's potential economic and societal shifts may alter demand for post-secondary education. CAPF helps promote strategic, long-term planning towards an aligned, responsive, and resilient advanced learning system able to meet these changing demands. By highlighting key demographic, economic, and societal drivers that impact post-secondary education, CAPF provides a common foundation for planning, priority-setting, and information sharing across Campus Alberta.

At its highest level, CAPF aims toward the following outcomes:

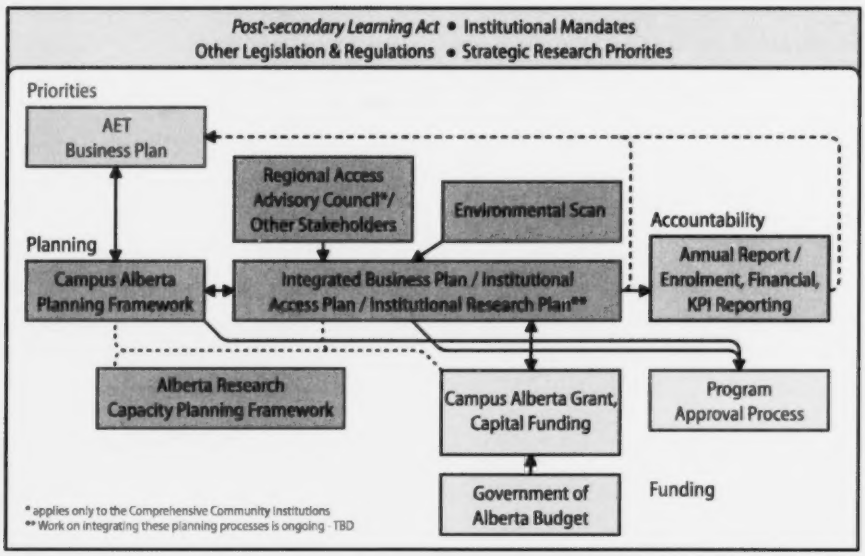
- The provision of a common data and information foundation to support evidence-based decision-making.
- Improved planning through better alignment of system capacity with the needs of learners and the labour market.
- Improved integration of Campus Alberta and Alberta Innovates in support of Albertans' success in the knowledge-driven economy.

Planning and Priority Setting

The graphic below provides a visual representation of Campus Alberta's planning and priority-setting process. In conjunction with the Alberta Research Capacity Planning Framework (ARCPF – discussed in more detail in Chapter Seven), the CAPF provides a comprehensive environmental scan and broad direction in support of more coordinated system planning, feeding into institutions' strategic planning.

AET is currently in the process of reviewing its planning processes. One anticipated outcome of this review is the consolidation of the IAP, institutional business plan, and Institutional Research Plan (IRP) processes. This outcome will be informed by the CAPF.

Planning and Priority Setting Process


Post-secondary Learning Act • Institutional Mandates
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Priorities
AET Business Plan
Regional Access Advisory Council*/ Other Stakeholders
Environmental Scan
Accountability
Planning
Annual Report / Enrolment, Financial, KPI Reporting
Campus Alberta Planning Framework
Integrated Business Plan / Institutional Access Plan / Institutional Research Plan**
Alberta Research Capacity Planning Framework
Campus Alberta Grant, Capital Funding
Program Approval Process
Government of Alberta Budget
Funding
* applies only to the Comprehensive Community Institutions
** Work on integrating these planning processes is ongoing - TBD

CHAPTER ONE: PEOPLE & DEMOGRAPHICS

The composition of Alberta's population is the foundation for its post-secondary enrolment growth. The population's demographic profile determines the pressure points for post-secondary access and the types of strategies that will be most successful in increasing access to educational opportunities for Albertans. Different groups of people have different needs and face distinct barriers to post-secondary participation. Along with provincial trends, demographic shifts at the regional and sub-population group levels must be considered.

POPULATION

With strong in-migration and a comparatively young demographic structure, Alberta has historically had one of the strongest rates of population growth in Canada. Over the 1972 to 2009 period, Alberta's average annual population growth was 2.1% – almost double the Canadian average of 1.1%.[1] Alberta's fertility rate – the number of live births per 1,000 women – has been rising, reaching 1.92 in 2009. Life expectancy has also been increasing, reaching 82.6 years for women and 77.5 years for men.[2]

Components of Population Growth, Alberta, 2009

Total Population (Jan.1, 2009)	3,643,752
Births	52,119
Deaths	21,781
Net Interprovincial Migration	6,566
Net International Migration	23,201
Net Non-Permanent Residents	7,988
Net Population Growth	68,093
Total Population (Jan.1, 2010)	3,711,845

Source: Alberta Finance and Enterprise

The major urban areas of Calgary (Census Division 6) and Edmonton (CD11) accounted for almost 70% (or 2.5 million people) of Alberta's population in 2009.[3]

As of January 1, 2010 Alberta's population was estimated to be 3,711,845 people. This is an annual increase of 1.9% and the highest population increase of all the provinces and above the Canadian average of 1.2%.[4]

Projected Population Growth

Generally, Alberta's population growth is expected to remain positive, but also to moderate.[5] Over the 2009-19 forecast period, Alberta's total population is expected to increase by 17.9%, from 3,687,662 people to 4,347,800 people. The majority of this population growth is expected to occur in the older age cohorts: the proportion of Albertans aged 64-70 years is expected to grow by 73.4% over the forecast period, and those aged 70-74 years to increase by 70.5%. Smaller decreases will occur in the younger age cohorts, with negative growth anticipated for those aged 15-29 years – those in their prime post-secondary attending years.

The 20-24 year old cohort is expected to demonstrate the largest decrease in size, as its proportion of Alberta's overall population decreases by 15.4% from 291,260 people to 246,475 people. Alberta's 18-34 year old population is forecasted to decrease by 3.0% over the 2009-19 period.

As Alberta's population grows, it will also become more diverse. In 2009, a total of 500,588 people were members of a visible minority in Alberta. This figure is projected to increase by 14.3% to 572,401 people in 2019.[6]

The province's fertility rate is expected to moderate, declining to 1.78 by 2018, while life expectancy continues to gain strength, reaching

88.9 years for Albertan women and 86.0 years for men by 2050.[7]

While, at the provincial level, Alberta is anticipated to exhibit strong overall population growth with decreases in its youth cohorts, the nature and degree of population growth varies across the province. Regional variations in population growth can be attributed to the current age structure of the population and migration trends. For instance, urban areas are more likely to attract the majority of migrants.

Forecasted Population Growth by Service Region, All Ages

Geographic Service Region	2009 Population	2019 Population	% Change
Keyano Region	65,769	82,855	26.0%
Calgary Region	1,338,467	1,649,441	23.2%
Central Region	302,719	353,900	16.9%
Edmonton Region	1,337,747	1,541,124	15.2%
Medicine Hat	111,560	128,348	15.0%
Grande Prairie Region	109,038	124,510	14.2%
Lethbridge Region	184,583	208,451	12.9%
Portage Region	81,911	90,002	9.9%
Northern Lakes Region	86,596	94,799	9.5%
Lakeland Region	69,272	74,400	7.4%
Alberta	3,687,662	4,347,775	17.9%

Sources: Alberta Finance and Enterprise, Statistics Canada, 2010

Service regions are expected to post strong population growth over the 2009-19 forecast period, from a high of 26.0% in the Keyano Region to a low of 7.4% in the Lakeland Region. Population growth in the prime post-secondary attending cohort shows more regional variation. While most regions show positive growth for this cohort, four regions show negative growth, from -3.3% in the Edmonton Region to -22.5% in the Keyano Region. The highest anticipated growth in this age cohort is in the Lakeland Region, with a forecasted growth rate of 9.9%.
Regional variation in expected population growth will require a more nuanced consideration of demand and capacity.

Forecasted Population Growth by Service Region, 18-34 Years

Geographic Service Region	2009 Population	2019 Population	% Change
Lakeland Region	14,992	16,478	9.9%
Lethbridge Region	45,478	48,691	7.1%
Medicine Hat	27,626	29,219	5.8%
Portage Region	19,384	20,450	5.5%
Central Region	77,862	79,994	2.7%
Northern Lakes Region	21,585	22,097	2.4%
Calgary Region	368,228	356,134	-3.3%
Edmonton Region	362,495	342,556	-5.5%
Grande Prairie Region	30,911	28,497	-7.8%
Keyano Region	23,182	17,965	-22.5%
Alberta	991,743	962,075	-3.0%

Sources: Alberta Finance and Enterprise, Statistics Canada, 2010

Along with these anticipated demographic changes, student mobility patterns, application trends, and enrolment data are key considerations in attempting to align planning and investment decisions today to meet both short-term and longer-term needs. For example, while youth population growth in one region may provide some indication of post-secondary demand, student mobility and choice factors may lead many to pursue further education outside their home region. Student mobility is discussed later in the 'Alberta Moves' chapter.

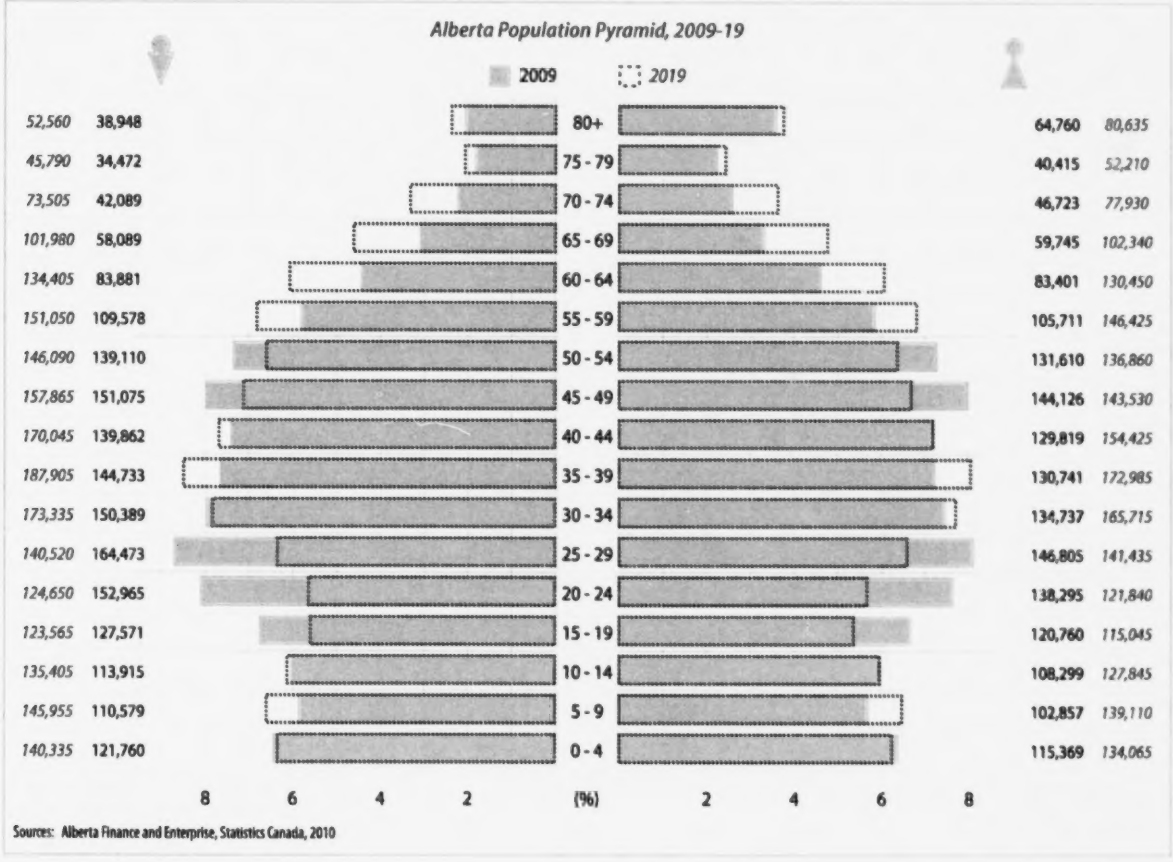
An Aging Population

As noted earlier, the majority of Alberta's future population growth will occur in the older age cohorts, as baby boomers – those born between 1947 and 1966 – enter retirement age. Baby boomers comprised almost one-third of Canada's population in 2009, numbering about 9.8 million people. Most baby boomers are currently of peak working age, with the oldest boomers just beginning to hit retirement age. By 2015, the baby boomer cohort will be concentrated in the 55-65 year old age group, with the last of the cohort preparing to leave the labour force by 2030 (assuming they choose to work until the age of 65 years).[8]

While Canada has a strong history of immigration, a significant proportion of immigrants to Canada during the 1980s and 1990s belonged to the baby boom generation – these immigrant Canadians also contribute to the overwhelming proportion of baby boomers that make up Canada's aging population. [9]

Over the past 30 years, Alberta's median age has risen from 26.5 years in 1979 to 35.6 years in 2009 – its highest recorded level. A total of 10.4% of the province's population was aged 65 years and over in 2009. Median age increases are taking place in all Alberta CDs, albeit at different rates, from a high of 16.4% of the population aged 65 years and over in Pincher Creek (CD3) to a low of 2.0% in Wood Buffalo (CD16). While Alberta's population is aging, its relatively younger population has the province aging at a slower rate than the rest of the country, with 13.9% of Canada's population aged 65 years and over in 2009 compared to Alberta's 10.4%. [10]

This demographic change has significant implications for our society. As baby boomers account for 30% of Canada's population, their aging will have an increasingly negative effect on both the tax base and savings rate. [11] Significant population aging will pressure governments to increase healthcare spending as demand for services increase. Governments will be increasingly challenged to support the levels of service delivery – and the quality of service delivery – citizens currently experience. This will be compounded by the retirement of significant segments of the workforce, as fewer working people must support the needs of a



large generation of individuals no longer in the labour market. All this will occur in a relatively short time span. The dependency ratio – a comparison of people not of working age (i.e., aged 0-14 and 65+ years) with working people aged 15-64 years – is a telling indicator of the magnitude and potential societal impact of the demographic shifts underway. In 2009, Alberta's dependency ratio was about 40 – i.e., there were about 40 non-working people for every 100 working people in the province. By 2035, this figure is expected to rise to 56 and, by 2050, to reach 65. While the proportion of seniors is expected to increase, the proportion of children in the population is expected to remain relatively stable at around 16%. By 2028, the number of seniors is expected to exceed the number of children for the first time in Alberta's history.[12]

Migration is likely to be the key factor in alleviating the decline in Alberta's working-age population.

MIGRATION

While it is unlikely that even a strong level of migration to Alberta can reverse its aging trend, it can help keep population growth stable. Migration to Alberta is strongly influenced by Alberta's relative economic performance, and has been a major factor in the province's varying degrees of population growth. In times of strong economic growth, Alberta's population has grown three to four times the rate of Canada's population; in times of economic slowdown, the opposite trend is observed. For example, in the early 1980s Alberta's population growth fell from a historical high of 4.6% in 1981 to a historical low of 0.0% within three years, while the national rate steadily grew at an annual rate of about 1.0%.[13] During this time, natural increases (i.e., births) accounted for practically all of Alberta's population growth.

International Migration

Immigration to Alberta is largely driven by federal immigration policies. Historically, about 8.7% of Canada's immigrants have chosen Alberta on entry.[14] The number of people immigrating to Alberta has been increasing. In 2009, Alberta gained a historical high of 39,132 net international migrants.[15] Immigration to Alberta is uneven, with the overwhelming majority of Alberta's immigrants choosing larger urban centres. Calgary (CD6) and Edmonton (CD11) accounted for almost 90% of total net immigration (59% and 29% respectively) to Alberta between 2000 and 2009, while 12 Albertan CDs received virtually no international migrants during this period.[16]

Inflows of Non-Permanent Residents, Alberta

	Temporary Foreign Workers	International Students	Total
2005	12,681	5,044	17,725
2006	18,515	5,369	23,884
2007	29,372	5,292	34,664
2008	39,080	6,121	45,201
2009	28,614	5,532	34,146

Source: Citizenship and Immigration Canada (CIC) - *Facts & Figures*

In recent years, Alberta has seen significant numbers of Temporary Foreign Workers (TFWS) enter the province to take advantage of economic opportunities. Over the short term, the number of TFWS entering Alberta is expected to decline sharply, with a more gradual decline over the medium term as Alberta's economy stabilizes.[17]

As will be discussed later, Alberta is attracting increasing numbers of international students. With their skills and knowledge of Alberta society, this group of travelers could be an integral link in the province's relationships

with other people and places. International students also possess a wide range of valuable skills from which Albertans can learn and the economy can benefit.

In keeping with its 2009 target, the federal government aims to attract between 240,000 and 265,000 immigrants in 2010.[18] Immigration to Alberta is expected to reach 32,600 people annually by 2050.[19]

Interprovincial Migration

As with immigrants to Alberta, the majority of the province's interprovincial migrants typically settle in the urban areas of Calgary and Edmonton. Unlike the case with Alberta's immigrants, however, every CD in the province has seen positive average net interprovincial migration over the past decade.[20] Along with the Edmonton and Calgary CDs, areas undergoing major economic development have seen substantial interprovincial in-migration; Wood Buffalo (CD16) saw net interprovincial migration more than triple from about 1,000 people in 2000 to about 3,800 in 2009.[21]

The net inflow of people from other provinces to Alberta is expected to drop to around 5,000 in 2010, reducing population growth from 2.6% in 2009 to 1.5% in 2010. In the medium term, population growth is expected to rise to 1.7% and net interprovincial migration strengthen to its long-term average of around 14,000 people by 2013 as the economy returns to a period of stable growth.[22] International migration will continue to surpass interprovincial migration to Alberta.

Intraprovincial Migration

Intraprovincial migration examines the movement of people within Alberta. Using data at the CD level, migrant flows have been aggregated into service regions. Over the past decade, only the Edmonton and Central regions have shown consistent positive net gains every year. Along with the Calgary region, these major urban areas of the province have shown positive average growth over the past decade, from 1,506 people per year in the Edmonton region to 765 people per year in the Calgary region. All other regions have shown negative average annual growth, ranging from a net loss of -973 people per year in the Keyano region to -11 people per year in the Medicine Hat region.

Most intraprovincial movement is from smaller centres and rural regions of the province to more urban centres with denser populations. This mirrors a global urbanization trend as people migrate to the cities in order to access a greater variety of economic and educational opportunities.

Net Intraprovincial Migration by Service Region, 2000-2009

Geographic Service Region	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	10-Year Average
Calgary Region	1,621	1,980	1,137	336	955	1,720	-231	-1,142	638	638	765
Central Region	603	490	359	673	860	1,117	1,583	1,638	774	774	887
Edmonton Region	1,098	340	2,440	768	223	1,712	2,487	1,785	2,106	2,106	1,506
Grande Prairie Region	-920	-346	-396	-132	170	198	92	-854	-849	-849	-389
Keyano Region	-407	-199	-129	220	-31	-1,232	-1,993	-1,722	-2,120	-2,120	-973
Lakeland Region	-344	-228	-357	-209	-314	-359	-143	259	81	81	-153
Lethbridge Region	-276	-778	-968	-428	-597	-1,173	-491	385	-116	-115	-456
Medicine Hat Region	41	-324	-507	-71	244	-200	-206	565	177	176	-11
Northern Lakes Region	-592	-590	-405	-462	-191	-470	-345	-262	-244	-244	-380
Portage Region	-428	-293	-368	-109	-576	-540	-73	-66	64	64	-233

Sources: Statistics Canada, Alberta Finance and Enterprise (2010)

DIVERSITY

Combined with regional population trends, Alberta's overall demographic trends are useful indicators to understand the pressures on post-secondary access points across the province. Within the larger population figures, a number of significant demographic pressures exist within particular populations. While not homogenous, these groups of individuals often share traits and needs that impact the timing, location, and nature of their post-secondary demand. A better understanding of the demographic profile of these groups is integral to meeting demand for post-secondary education and creating the right kind of capacity in the system to enable these individuals to access learning.

Aboriginal Population

Aboriginal peoples represent one of the fastest (and one of the few) growing segments of Canada's population. The number of Canadians identifying themselves as Aboriginal surpassed the one million mark in Census 2006, accounting for 3.8% of Canada's population that year.[23] Between 1996 and 2006, Canada's Aboriginal population grew by 45%, nearly six times faster than the 8% rate of increase for the non-Aboriginal population. This growth rate is due to several factors, including demography (higher fertility rates, age structure of the population), the increasing tendency to self-identify, and the reduction in the number of incompletely enumerated reserves since 1996.[24]

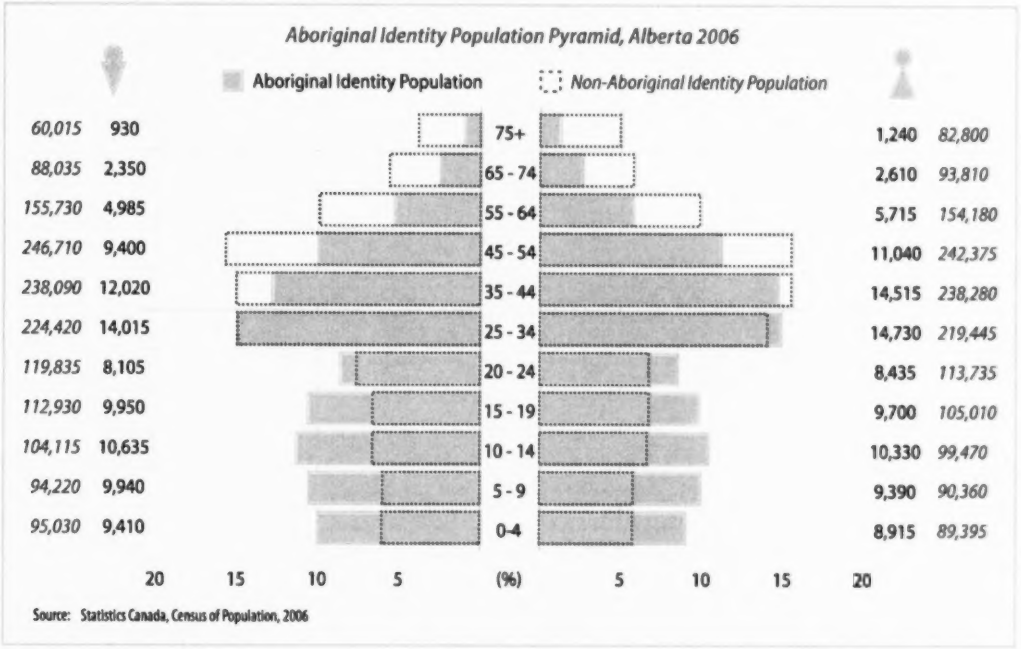
A significant proportion of Canada's Aboriginal peoples live in Alberta. Alberta had 16% of Canada's Aboriginal population in 2006 (the third highest after Ontario and British Columbia at 21% and 17% respectively), comprising 6% of Alberta's total population. This was the third highest proportion among the provinces after Manitoba (15%) and Saskatchewan (15%).[25] Consistent with global trends, the Aboriginal population is increasingly urban. In 2006, a total of 54% lived in urban centres, a 4% increase since 1996.[26] The Edmonton Census Metropolitan Area (CMA) had the second largest number of Aboriginal people in 2006, accounting for 5% (52,100 people) of its total population, followed by the Calgary's CMA with Aboriginal people making up 2% of its population.[27]

Of all Aboriginal population groups, Canada's Métis population was the fastest growing, increasing by 91% from 2001 to reach 389,785

people in 2006. Due to high fertility rates relative to both Aboriginal and non-Aboriginal populations, as well as an increasing tendency to self-identify, the Métis population is outpacing the growth of other Aboriginal groups and the non-Aboriginal population.[28]

In Alberta, the number of people identifying as Métis has increased by 73% from 1996 to 2006, to a total of 88,500 people.[29] Alberta has historically been the main province of residence for Canada's Métis population, with 22.4% (68,500 people) of Canada's Métis people living in Alberta in 2001.

Aboriginal Canadians are not only growing in number faster than the overall population, they are also much younger. In 2006, the median age of Canada's Aboriginal population was 27 years, compared with 40 years for the non-Aboriginal population. Almost half (48%) of the Aboriginal population consists of children and youth aged 24 and under, compared with 31% of the non-Aboriginal population.[30] In 2006, about one-third of the First Nations population was made up of children under age 15, while only 5% were seniors aged 65 years and over.[31]



Source: Statistics Canada, Census of Population, 2006

People with Disabilities

Based on data from the most recent Participation and Activity Limitation Survey (PALS), an estimated 4.4 million Canadians (one out of seven) reported having a disability in 2006. This is an increase of over 750,000 people in five years.[32] In Alberta, a total of 435,820 individuals had a disability in 2006.

A notable finding from PALS 2006 was the marked increase in reported learning disabilities.[33] From 2001, the number of Canadians aged 15 years and over reporting a learning disability increased by almost 40% to approximately 631,000 people in 2006. The same year, children aged 5 to 14 reporting a disability accounted for 3.2% of this age group's Canadian population. Of children reporting a disability, about 69% reported a learning disability. In 2008-09, almost 85,000 children in Alberta's K-12 system were coded as having a disability – almost 30% of students in grades one to twelve.[34]

The rate of disability rises as the population ages, making a province's demographic composition integral to its overall disability rate; at the Canadian level, about 40% of Canada's 2006 disability rate can be explained by population aging.[35] Although Alberta's relative younger population helps account for it having the lowest disability rate among the provinces in 2006 at 13.6% (the Canadian average was 14.3%),[36] the province will face increasing numbers of people with disabilities as its population ages and the acceptance, diagnosis, and availability of supports for people with disabilities increases.

The significant numbers of students with disabilities will place increasing pressure on the education system (both K-12 and post-secondary) to provide timely educational assessments and accommodations that will ensure successful educational outcomes and a smooth transition to post-secondary education. As Alberta's population ages and its labour force shrinks, finding new and creative ways to increase labour market access for people with disabilities – including older workers – will be integral to helping ameliorate labour market shortages.

People with Disabilities, Alberta 2006

Age Group	Total Population	People with Disabilities			
		Number	% of Total	Male	Female
0-4 Years	197,730	2,940	1.4%	2,000 (68.0%)	940* (32.7%)
5-14 Years	418,220	22,280	5.3%	13,880 (62.3%)	8,390 (38.6%)
15-24 Years	479,170	23,090	4.8%	12,040 (52.1%)	11,040 (47.8%)
25-44 Years	963,930	77,920	8.0%	36,940 (47.4%)	40,980 (52.6%)
45-64 Years	823,500	154,620	18.8%	78,170 (51.6%)	76,440 (49.4%)
65-74 Years	185,460	68,410	36.9%	32,790 (47.9%0	35,630 (52.0%)
75 Years +	144,350	86,560	60.0%	35,120 (41.7%)	51,440 (59.4%)
All Ages	3,212,360	435,820	13.6%	210,950 (48.4%)	224,870 (51.6%)

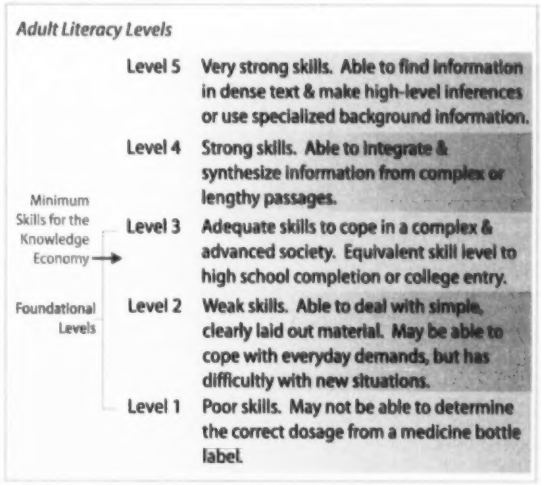
Note: * Use with caution.
Percentages may not total due to rounding.
Source: Statistics Canada - Participation and Activity Limitation Survey, 2006

EDUCATIONAL ATTAINMENT & LITERACY

Educational attainment – the highest level of education completed – impacts an individual's ability to undertake daily tasks, obtain and maintain employment, and pursue further education and learning. High educational attainment can be indicative of a skilled, knowledgeable, and engaged population able to take advantage of economic opportunities.

Higher levels of education are also typically associated with higher incomes and a better quality of life – including elements like improved health, greater levels of civic engagement, and lower levels of crime.[37] In Alberta, data from the 2003 International Adult Literacy and Life Skills Survey (IALLS)[38] show that Albertans with lower levels of literacy also had lower levels of health. Across Canada, the average document literacy score of individuals aged 16-65 years who reported being in poor health corresponded to Level 2 proficiency, whereas those in fair, good or excellent health had scores corresponding to Level 3 proficiency.[39]

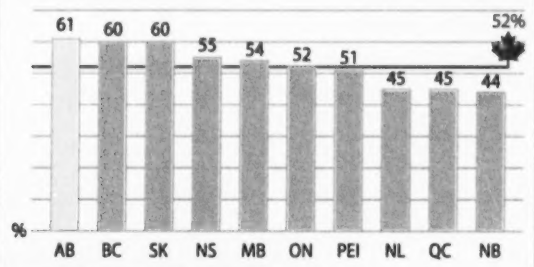
Data also show a strong relationship among literacy, employability, and type of employment. About 62% of employed Canadians have average document literacy scores at Level 3 or above, compared to the over 50% of unemployed Canadians with document literacy scores below Level 3. Occupations requiring higher levels of problem-solving, critical thinking, and analysis typically require high literacy levels (i.e., Level 4 or 5).[40] Strong literacy skills enable individuals to be more adaptable to changing circumstances, less vulnerable to economic shocks, and more easily acquire new skills, whether through formal learning or on-the-job training.


Adult Literacy Levels
Level 5
Very strong skills. Able to find information in dense text & make high-level inferences or use specialized background information.
Level 4
Strong skills. Able to integrate & synthesize information from complex or lengthy passages.
Minimum Skills for the Knowledge Economy
Level 3
Adequate skills to cope in a complex & advanced society. Equivalent skill level to high school completion or college entry.
Foundational Levels
Level 2
Weak skills. Able to deal with simple, clearly laid out material. May be able to cope with everyday demands, but has difficulty with new situations.
Level 1
Poor skills. May not be able to determine the correct dosage from a medicine bottle label.

Relatedly, people with higher levels of literacy are more likely to participate in lifelong learning. Canadians with prose literacy scores of Level 1 have an adult learning participation rate of 20% compared to 70% for individuals at Level 4 or 5. About 80% of Canadians with a university degree participate in active forms of learning,[41] compared to 57% of Canadians with high school completion.[42]

In recent years, Alberta has posted educational attainment levels on par with the Canadian average. This is partly due to the province's strong economy, which draws young, skilled immigrants and interprovincial migrants already in possession of education and training who are looking for work. According to the most recent IALLS, 61% of Albertans performed at literacy Level 3 or better in 2003 – the skill level roughly equating to high school completion, where individuals have the minimum foundational skills necessary to function in the knowledge economy.

Population with Literacy Scores of Level 3+, Canada and Provinces 2003



Source: Human Resources & Skills Development Canada, 2003 (http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=31)

In 2009, a total of 22.6% of Alberta's labour force had a high school diploma as their highest level of educational attainment, slightly higher than the Canadian figure of 20.2%.[43] Approximately 71.5% of Albertans complete high school within three years of entering Grade 10. As the length of time after entering Grade 10 increases, so does the completion rate, with 79.0% of Albertans completing high school within five years of entering Grade 10. High school completion rates vary across the province, from a high of 82.4% in the Lakeland Region to a low of 67.8% in the Northern Lakes Region for the 5-year rate in 2008-09.

High School Completion Rate by Service Region, 2008-09

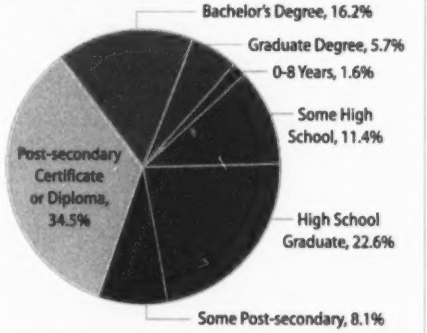
Geographic Service Region	3-Year Rate	4-Year Rate	5-Year Rate
Calgary Region	73.5%	77.7%	80.7%
Central Region	73.5%	77.4%	79.8%
Edmonton Region	70.6%	75.4%	78.3%
Grande Prairie Region	66.4%	70.4%	73.6%
Keyano Region	70.3%	74.8%	77.4%
Lakeland Region	74.3%	83.3%	81.6%
Lethbridge Region	74.4%	79.8%	82.4%
Medicine Hat Region	72.9%	78.5%	81.8%
Northern Lakes Region	57.7%	61.7%	67.8%
Portage Region	63.7%	69.9%	73.5%
Alberta	71.5%	76.1%	79.0%

Source: Alberta Education

As technology advances, the demand for highly skilled, educated workers will increase. With today's worker having an expected three careers and eight jobs over a lifetime,[44] there will be increasing pressure on individuals to maintain and upgrade their skills to keep pace with technology and change. With about 65% of all new jobs created by 2012 expected to require some form of post-secondary education,[45] a post-secondary credential is increasingly replacing the high school diploma as the key to labour market entry, as well as being linked to overall economic health, innovation, and quality of life.

In 1990, only one-third of Canada's population had completed some form of post-secondary education. By 2009, this share had increased to 50%.[46] In 2004, a total of 50.9% of Alberta's labour force had attained post-secondary qualifications. In 2009, this figure had risen to 56.3%.[47]

Educational Attainment of Albertans in the Labour Force, Aged 15+ Years, 2009



Note: Percentages may not total 100 due to rounding.
Source: Statistics Canada - Labour Force Survey (CANSIM Table 282-0004)

While Albertans' level of educational attainment has increased over the past decade, similar progress has not occurred in levels of literacy. Alberta posts comparatively healthy levels of literacy, yet the proportion of adult Albertans with foundational literacy did not increase in the decade between the first international literacy survey in 1994 and the second in 2003.[48] There has been significant progress in the proportion of Albertans with post-secondary education, however. Since

1990, the proportion of Albertans with post-secondary education has risen steadily from 35.4% to reach over half of the population at 51.1% in 2009.[49]

Over the forecast period of 2009-19, Alberta Employment and Immigration (AEI) projects that the proportion of Albertans with a post-secondary education will increase to 60.1%.[50] The largest increase in educational attainment over the 2009-19 period is forecasted at the university level, at almost 3%.[51]

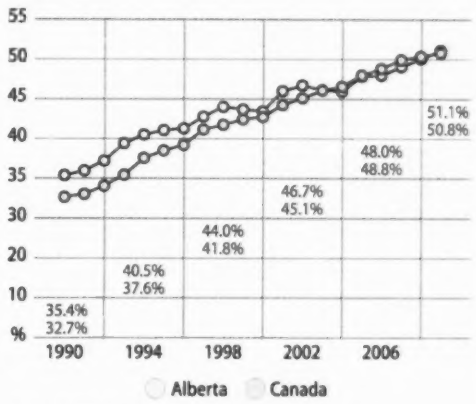
A greater proportion of these individuals with post-secondary education is forecasted to be female: a total of 61.5% of females, compared to 58.7% of males, are expected to have a post-secondary credential by 2019. Gender differences are also apparent in program choice, with females more likely than males to graduate from education and health related fields. Males are more likely to graduate in architecture, engineering, and mathematical and computer sciences.[52]

Proportion of Aboriginal Albertans with PSE, Alberta and Service Regions

Geographic Service Region	2001 Aboriginal	2001 Non-Aboriginal	2006 Aboriginal	2006 Non-Aboriginal
Calgary Region	0.8%	49.8%	1.0%	54.7%
Central Region	0.9%	39.2%	1.2%	42.6%
Edmonton Region	1.2%	43.8%	1.8%	48.6%
Grande Prairie Region	1.7%	36.9%	1.8%	48.6%
Keyano Region	3.6%	44.9%	4.2%	50.2%
Lakeland Region	0.8%	36.9%	1.0%	40.6%
Lethbridge Region	1.7%	38.1%	2.2%	42.5%
Medicine Hat Region	0.5%	35.4%	0.9%	40.0%
Northern Lakes Region	6.6%	27.2%	6.6%	28.3%
Portage Region	5.2%	32.7%	6.0%	36.1%
Alberta	1.3%	44.0%	1.7%	48.7%

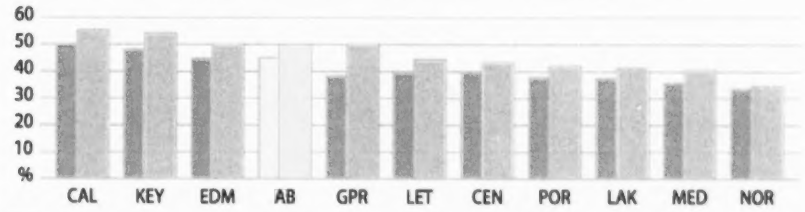
Source: Statistics Canada - Census of Population (Custom Tabulation)

Proportion of the Population Aged 15+ Years with PSE, 1990-2009



Source: Statistics Canada - Labour Force Survey (Custom Tabulation)

Proportion of the Population Aged 15+ Years with PSE, Alberta and Service Regions, 2006



	CAL	KEY	EDM	AB	GPR	LET	CEN	POR	LAK	MED	NOR
2001:	50.6%	48.5%	45.0%	45.3%	38.6%	39.8%	40.0%	37.9%	37.6%	35.9%	33.9%
2006:	55.7%	54.4%	50.4%	50.4%	50.4%	44.7%	43.7%	42.1%	41.6%	40.9%	38.9%

Source: Statistics Canada - Census 2006 (Custom Tabulation)

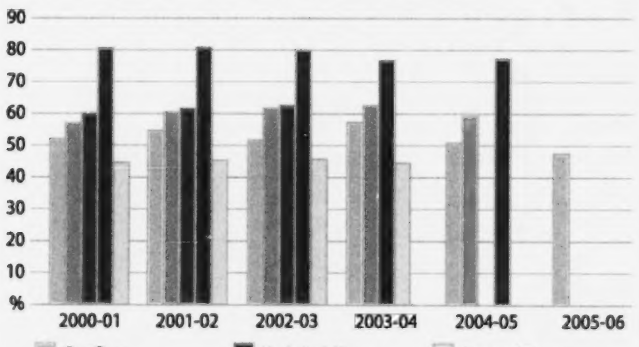
Post-secondary completion rates examine the rate at which learners fulfill all their program requirements within a specified amount of time. The measure uses a cohort-based method, which tracks completion based on the year in which learners entered their program of study. The methodology provides learners with the typical program length with an additional three years in order to complete.[53] For example, learners enrolled in Certificate programs are given four years to complete (1+3), learners in diploma programs five years (2+3), Bachelor's Degree learners seven years (4+3), Master's Degree learners five years (2+3), and Doctoral Degree learners six years (3+3).

Looking at the most recent cohort for which data are available, about 48% of learners beginning a certificate program in 2005-06 completed their program within four years. In the 2004-05 cohort year, completion rates varied among credentials, with about 77% of Master's Degree and 59% of Diploma learners completing within the specified timeframe. For Bachelor Degree students beginning in the 2002-03 cohort year, about 63% completed within the timeframe.

At the Doctoral level, about 45% of students have tended to complete their program within the six-year timeframe. The rate of completion is linked to the time in the program: looking at the 2000-01 cohort, the proportion of learners completing their program increases to 59% within seven years, to 67% within eight years, and to just over 70% when the period is extended to nine years.

More data and analysis is required in order to examine potential differences in completion among fields of study and student population, and potential implications on access and the ability to meet labour market demand.

Post-secondary Completion Rates by Credential and Cohort Year



Notes: Does not include Athabasca University.
Does not include Applied Degrees
The cohort year is the year of program commencement..
Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

Chapter Summary:

- Alberta's population is aging, with declining numbers of youth and working age people to participate in post-secondary learning, meet labour market needs, and support growing numbers of older, retired Albertans.
- While the province has strong levels of educational attainment, it is reliant on gains of educated individuals migrating to Alberta. Interprovincial in-migration and immigration will be increasingly important to Alberta's ability to maintain population stability and meet labour market needs.
- As levels of migration to Alberta are strongly linked to its relative economic performance, Alberta will need to explore ways of attracting and retaining people to the province, and supporting those already here to stay and make the best use of their knowledge and skills.
- Segments of Alberta's population showing the strongest population growth are also those with the lowest levels of educational attainment and labour market participation.
- There is significant potential for improvements in literacy among Albertans.

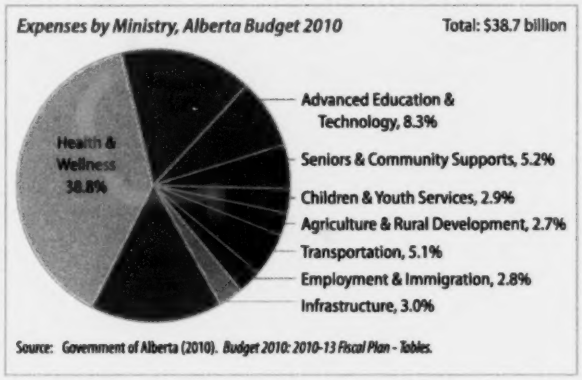
CHAPTER TWO: ECONOMY

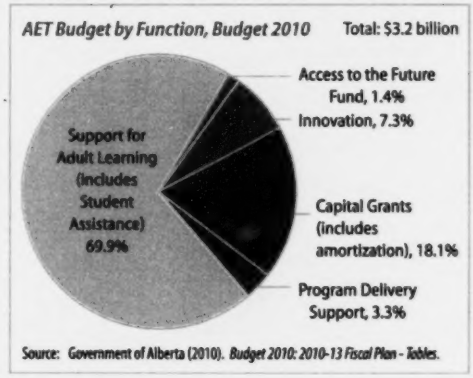
In late 2009, Alberta started to recover from its first recession in over a decade. The recession saw the province's unemployment rate fall below that of other provinces for the first time in recent years, interprovincial migration taper off as available economic opportunities weakened in comparison to other provinces, and youth unemployment and post-secondary demand rise as Albertans returned to or remained in school in order to wait out an unwelcoming job market.

BUDGET 2010

The Government of Alberta's (GOA) 2010 Budget, *Striking the Right Balance*, provided AET with an operating budget of over $3.2 billion for 2010-11, an overall reduction of $205 million (6%) from the previous year. This decrease was largely comprised of completed capital projects, the fulfillment of one-time funding arrangements, and changes to Alberta Innovates agencies.[54]

Institutions' operating and targeted funding streams were combined to provide institutions with greater flexibility to prioritize the needs of their students and their campus communities. With institutions receiving 6% base operating grant increases in the five previous budget cycles and continued commitment to sustained funding through Budget 2010, Campus Alberta is well-positioned as the province moves into economic recovery.


Expenses by Ministry, Alberta Budget 2010
Total: $38.7 billion
Health & Wellness 38.8%
Advanced Education & Technology, 8.3%
Seniors & Community Supports, 5.2%
Children & Youth Services, 2.9%
Agriculture & Rural Development, 2.7%
Transportation, 5.1%
Employment & Immigration, 2.8%
Infrastructure, 3.0%
Source: Government of Alberta (2010). Budget 2010: 2010-13 Fiscal Plan - Tables.


AET Budget by Function, Budget 2010
Total: $3.2 billion
Support for Adult Learning (includes Student Assistance) 69.9%
Access to the Future Fund, 1.4%
Innovation, 7.3%
Capital Grants (includes amortization), 18.1%
Program Delivery Support, 3.3%
Source: Government of Alberta (2010). Budget 2010: 2010-13 Fiscal Plan - Tables.

ECONOMIC OUTLOOK

The recession left both the federal and many other provincial governments in debt. Provinces collectively took on a $48.5 billion deficit in 2009 – the largest collective deficit in history.[55] Provincial governments will face a challenge keeping pace with increasing healthcare budgets and a changing saving landscape as baby boomers retire.[56] GOA Budget 2010 forecasts a deficit of $4.7 billion for 2010-11 and $1.1 billion for 2011-12. A return to a balanced budget and a modest surplus of $505 million is anticipated for 2012-13.[57]

Despite the increased debt load, Alberta's economy is in recovery. After contracting by an estimated 2.5% in 2009, the Alberta economy is expected to expand by 2.6% in 2010, with increased revenue of $423 million from the previous year.[58] The beginning pace of Alberta's economic recovery is expected to be moderate due to subdued economic

recovery and weak natural gas prices that are likely to dampen investment in the conventional energy sector. Over the medium term, Alberta's economic growth is forecast to strengthen and return to around 3%, which is a more sustainable pace of growth than the 5.4% average growth rate of the 2004-06 period.[59]

World oil prices are expected to rise from an average of US$69.95 per barrel in 2009-10 to US$89.50 by 2012-13.[60] As a result of higher price points and greater demand (particularly from Asia), a positive outlook is forecasted for Alberta's resource sector, with anticipated revenues to increase by 21.7% to reach $7.3 billion in 2010-11. By 2012-13, expected resource revenues should total $10.4 billion.[61] Lower construction costs and higher prices are helping renew interest in the oil sands, with investment increasing by 20% in 2010. While these levels of investment are below the 2008 peak, this is a more sustainable rate of investment and growth for the province.[62]

While an overall positive outlook is forecasted for Alberta, the province is not immune to global forces. Several risk factors will affect the province's rate of economic recovery:[63]

- **The pace at which global authorities withdraw stimulus packages**: A quick withdrawal could dampen energy prices and weaken Alberta's exports, while a slow withdrawal could cause inflation and interest rates to rise, increasing household and government debt.

Key Energy & Economic Assumptions, Alberta Budget 2010

Fiscal Year Assumptions	2008-09 Actual	2009-10 Estimate	2010-11	2011-12	2012-13
Revenue (CDN$millions)	35,811	33,541	33,964	37,302	40,239
Expenses (CDN$millions)	36,663	37,165	38,712	38,437	39,734
Suplus/(Deficit) (CDN$millions)	(852)	(3,624)	(4,748)	(1,135)	505
Crude Oil Price					
West Texas Intermediate (WTI) (US$/bbl)	85.94	69.95	78.75	83.50	89.50
Alberta Wellhead (CDN$/bbl)	82.82	67.40	72.20	76.48	82.00
Bitumen @ Cold Lake (CDN$/bbl)	61.54	49.36	56.38	59.79	64.07
Natural Gas Price					
Alberta Reference Price Index (CDN$/GJ)	6.97	3.40	4.25	5.25	5.50
Exchange Rate (US¢/CDN$)	89.59	91.67	95.00	95.00	95.00
Calendar Year Assumptions	**2009 Actual**	**2010 Estimate**	**2011**	**2012**	**2013**
Real GDP (millions of 2002$)	181,114	185,875	191,301	196,980	203,069
Unemployment Rate (%)	6.6	6.6	6.0	5.3	4.9
Alberta Consumer Price Index (% change)	-0.1	2.0	2.1	2.1	2.1

Source: Government of Alberta (2010). *Budget 2010: 2010-13 Fiscal Plan - Tables.* (http://www.finance.alberta.ca/publications/budget/budget2010/fiscal-plan-tables.pdf)

- **The Rate of North American Economic Recovery**: A speedy rate of increase could lead to unsustainable, rapid growth in the Alberta economy.
- **The Strength of Oil Prices**: Recent investment has lessened due to the economic downturn, affecting global supply. An unexpectedly sudden economic recovery could lead to oil price spikes.
- **The stability of the US dollar** will impact North American recovery and Alberta's exports.
- **Rate of European Economic Recovery**: Recent actions by European governments to support their financial sectors and countries in extreme deficit situations may impact global economic growth, thereby affecting Alberta's rate of economic recovery.

UNEMPLOYMENT & LABOUR MARKET PARTICIPATION

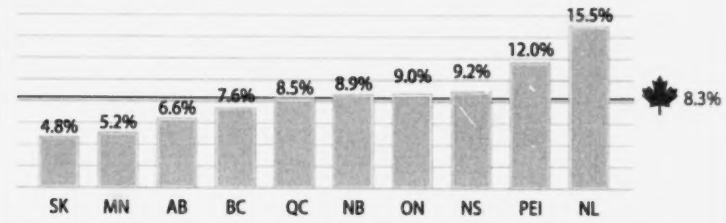
The labour market is typically the last part of the economy to recover from a recession. Employers are cautious about hiring new staff or increasing hours until the economy has returned to a stable place, when both consumer and investor confidence have returned. When employers begin hiring significant numbers of permanent, full-time workers depends on the strength and stability of the economic recovery as it progresses.

From 2008 to 2009, Alberta lost about 25,200 jobs and the unemployment rate increased by 3% to reach 6.6%. In 2009, unemployment rates increased in all economic regions of the province, ranging from 5.1% in Wood Buffalo-Cold Lake to 7.9% in Athabasca-Grande Prairie-Peace River.[64] Despite this, Alberta still had the third lowest unemployment rate among the provinces after Saskatchewan (4.8%) and Manitoba (5.2%),[65] and its working age labour market participation rate remained the highest of all provinces, at 74.3%.[66]

Job losses did not occur equally in all sectors. Alberta's largest job losses over the March 2009-10 period occurred in agriculture (-13,200), finance, insurance, real estate, and leasing (-13,200), and retail trade (-12,900). The largest employment gains over the period occurred in health care and social assistance (25,300), construction (9,400), and information, culture, and recreation (8,200).[67] Job losses were more severe for men than women, partly due to gender imbalances in fields of work; in 2009, there were significant job losses in male-dominated fields like manufacturing and construction, while female-dominated industries, such as healthcare, were less impacted by the recession.[68]

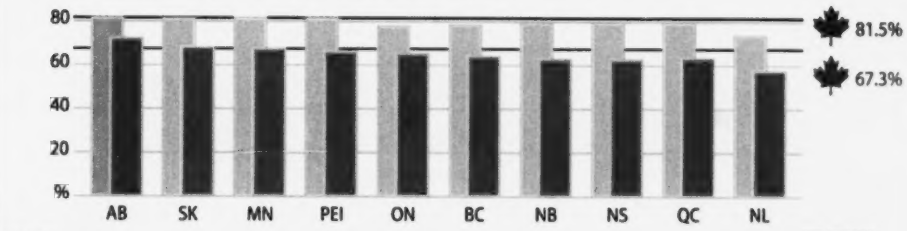
Moving into 2010, Alberta's labour market outlook is improving, with a modest increase of 15,000 jobs (0.8%) forecasted for the year. The unemployment rate is forecasted to average 6.6% in 2010, and steadily decrease to 4.9% by 2013.[69]

Unemployment Rates, Canada and Provinces 2009



Source: Statistics Canada - Labour Force Survey

Labour Force Participation Rate, Canada and Provinces, 2009



	AB	SK	MN	PEI	ON	BC	NB	NS	QC	NL
18-34 Years:	83.8%	83.7%	84.0%	83.9%	80.3%	80.9%	81.9%	82.2%	82.1%	76.1%
15+ Years:	74.3%	70.2%	69.4%	68.1%	67.3%	66.0%	64.7%	64.6%	65.2%	59.3%

Source: Statistics Canada - Labour Force Survey (Custom Tabulation)

Economic Indicators by Economic Regions, Alberta - March 2010

Economic Region	Unemployment Rate		Labour Market Participation Rate	
	March 2009	March 2010	March 2009	March 2010
Athabasca-Grande Prairie	6.5%	8.1%	75.2%	76.6%
Banff-Jasper-Rocky Mountain House	5.3%	4.6%	79.6%	77.1%
Calgary	5.8%	7.3%	76.1%	74.3%
Camrose-Drumheller	3.8%	5.0%	72.6%	71.3%
Edmonton	5.4%	7.3%	72.1%	70.8%
Lethbridge-Medicine Hat	4.9%	7.1%	67.3%	64.9%
Wood Buffalo-Cold Lake	5.9%	4.4%	75.4%	77.5%
Alberta	6.1%	7.5%	74.4%	73.2%

Note: Economic Regions refer to those used by Alberta Employment & Immigration and do not map to AET Geographic Service Regions.

Source: Alberta Employment and Immigration, Statistics Canada - Labour Force Survey (http://www.albertacanada.com/documents/SP-EH_monthlyEconomicReview.pdf)

Aboriginal Unemployment

As its overall population growth rate will be insufficient to meet anticipated labour market shortages, Alberta will need to rely more on its increasing Aboriginal population – a population with significant potential to improve its educational attainment and labour market outcomes. Improving the educational outcomes of the 37,800 off-reserve Aboriginal Albertans who have not completed post-secondary education could have a tremendous impact on the province's ability to meet current and projected labour market shortages. Similar outcomes for Aboriginal Albertans living on-reserve would further increase the potential impact.

In 2009, the employment rate of Aboriginal people living off-reserve in Alberta declined by 6.5%, dropping to 59.1%. This the lowest recorded figure since 2003 and 10% lower than the employment rate of the total Albertan population.[70] Employment among Aboriginal Albertans decreased in all but three economic regions: Athabasca-Grande Prairie-Peace River, Wood Buffalo-Cold Lake, and Red Deer. Almost half of Aboriginal Albertans' 2009 employment loss (2,300 people) in occurred in Calgary.[71]

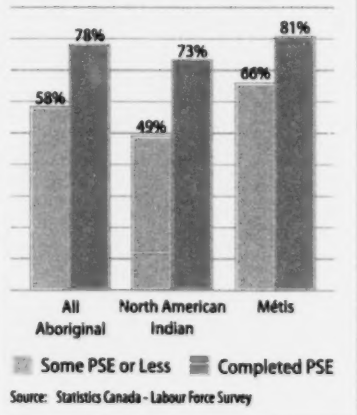
Moving into 2010, the unemployment rate for Aboriginal Albertans has shown slight improvement over the previous year. Just over two-thirds of Alberta's working age, off-reserve Aboriginal population was participating in the labour force – either employed or looking for work – in March 2010. Of these individuals, a total of 57.9% were employed. This figure is consistent with the previous year. A total of 17,847 people (16.9%) were unemployed, an increase of 2.1% from 2009.[72]

The labour market outlook is not the same for all Aboriginal groups. The labour market outlook for the First Nations population was slightly worse, and the outlook for the Métis population slightly better, than that of the total Aboriginal population. While 12.0% of the Métis population were unemployed in March 2010, over twice the proportion of the First Nations population (24.4%) faced the same circumstance.

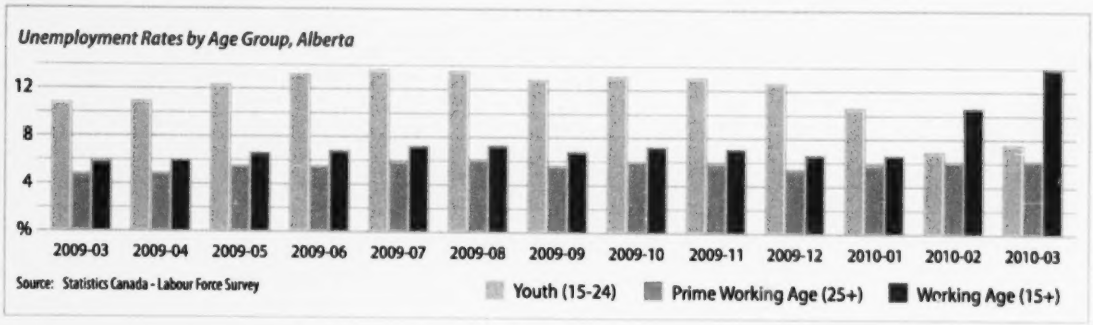
The varying labour market circumstances of different Aboriginal groups may be affected by the geographical distribution of Aboriginal populations in the province, with First Nations populations more likely to live on-reserve in rural areas than Métis people. The majority of Aboriginal Albertans were employed in the Edmonton and Calgary economic regions (57%) in 2009.[73] Aboriginal Albertans living outside these major urban centres face a more challenging economic context, with an unemployment rate over 3% higher than those living in either Edmonton or Calgary, at 18.9%.[74]

Aboriginal Albertans with a post-secondary credential have significantly improved labour market outcomes than those without, being almost 20% more likely to be employed.[75]

Aboriginal Employment Rate by Educational Attainment, Alberta - March 2010



Source: Statistics Canada - Labour Force Survey



Youth Unemployment

Young people are typically hardest hit in times of economic downturn. Youth have less experience in the labour market, making it more difficult to find employment when hiring – particularly for entry-level positions – is scaled back. In 2009, job losses were concentrated in lower-paying jobs, which are typically staffed by younger, less experienced workers or students.[76]

Across Organization for Economic Cooperation and Development (OECD) countries, youth unemployment (those aged 15-24 years) is more than twice as sensitive to business cycle fluctuations as the unemployment of prime-aged workers (those aged 25-54 years).[77] Canada's youth unemployment rate rose to 16% in December 2009, an increase from 13.1% the year before.[78] This is consistent with previous Canadian recessions; for example, following the economic downturn of the early 1990s, Canada's youth unemployment rate increased from 10% in 1989 to 16.5% in 1992.[79] In 2009, the number of employed Albertan youth declined by 7.7%; for the youngest workers aged 15-19 years, the decline was even greater at 12.5%.[80]

Due to the young age structure of its population, Aboriginal Albertans may be overrepresented in occupations typically filled by youth.[81] A total of 44.5% of Aboriginal Albertan youth were unemployed in March 2010. The figure for Métis youth was even higher, at 51.0%.[82]

Highlighting some of the current challenges facing Canadian youth, a recent survey of the Canadian Alliance of Student Associations examined student work and the ways students pay for post-secondary education.[83] In Alberta, a total of 3,737 undergraduate students from the universities of Alberta, Calgary, and Lethbridge participated. The survey provides some background on recent challenges post-secondary students face in finding work – and enough of it – in the summer months. Of those students who worked during summer 2009, a total of 60% indicated that, if they were able to, they would have worked more.

People with Disabilities in the Workplace

People with disabilities tend to have lower labour force participation rates and work fewer hours than people without disabilities, making them more vulnerable to periods of lower income.[84] In 2006, the unemployment rate for people with disabilities in Alberta was 5.5%, compared to 3.5% for people without disabilities.[85] That same year, the labour force participation rate for people with disabilities in Alberta was 70.7%, compared to 83.9% for people with disabilities.[86]

According to Census 2006, a total of 276,790 people with disabilities were identified as being

engaged in trades, transport, and equipment operators and related occupations. The only occupation with higher numbers was sales and service (465,470). The third highest was business, finance and administrative positions (262,260).[87]

Strategies that inform prospective employers about the abilities and potential contribution of people with disabilities to the workplace are integral to increasing the labour market participation of people with disabilities. Increased labour market opportunities for people with disabilities may also influence post-secondary participation, as opportunities for people with disabilities who have higher levels of educational attainment increase.

Immigrants & the Labour Market

Recent immigrants in the prime working age group also experienced heavy employment losses in 2009, particularly younger men in lower-paying jobs.[88]

The national unemployment rate for immigrants in the prime working age group who landed in Canada within the last 5 years is more than double the rate for Canadian-born individuals.[89]

Representation in occupations with low educational requirements shows an upward trend for Canada's immigrants, despite the increasing educational attainment levels of Canadian immigrants. Over the 1991 to 2006 period, the proportion of immigrants with a university degree in jobs with low educational requirements increased from 12% to 21% for men and from 24% to 29% for women. For those individuals born in Canada, the figure remained stable at about 10% over the period.[90]

The greatest labour force barriers for recent immigrants to Canada are a lack of Canadian work experience, a lack of recognition of foreign credentials, and language barriers. Persistent gaps between immigrant and non-immigrant Canadians' labour market outcomes may threaten the country's ability to attract and retain new Canadians. This is discussed more in the 'Alberta Moves' chapter in relation to the recognition of prior learning.

Retiring Workers

The recent economic downturn impacted retirement savings and pension plans, encouraging a number of older workers to remain in or return to the labour force. In a January 2010 consumer confidence survey, the Conference Board of Canada asked respondents whether the recent recession caused them to delay their planned retirement date by more than one year. Among respondents aged 45-54 years, a total of 36% indicated that they will delay their retirement by more than one year as a result of the recession.[91] In 2009, Albertans aged 55-69 years showed the largest increases in employment of any age group, rising 4.3% from the previous year.[92] Fewer Albertans retired in 2009 to a total of 14,900 people – a decrease of almost 4% from 2008.[93]

As the global economy recovers, this recessionary effect on retirement will likely diminish. Employers may need to explore ways of encouraging older workers to remain in the labour force longer in order to help decrease the impact of the baby boomer cohort's retirement on the labour supply.

ECONOMY & POST-SECONDARY EDUCATION

In general, research suggests that post-secondary enrolment trends are countercyclical to economic trends.[94] When the economy is strong, post-secondary enrolment growth tends to slow as individuals take advantage of labour market opportunities. When the economy weakens, post-secondary institutions provide a place where people can avoid an unwelcoming labour market by retraining or upgrading their skills in order to better take advantage of labour market opportunities when the economy recovers.

This countercyclical trend, however, may be more pronounced for some segments of the population than for others. Generally enrolment is less cyclical for under-represented groups (Aboriginal people, low-income people, people with disabilities, etc.), possibly demonstrating an inability or unwillingness to enrol in post-secondary education when the economy is weak and the opportunity costs may be too high. In the same way, students relying on part-time earnings and parental contributions may also find it more difficult to enrol during a recession.[95] The trend may also be more pronounced in particular programs or fields of study, as individuals attempt to maximize their educational experience to increase the chance of labour market success.

Research demonstrates that typical impacts of recession on post-secondary enrolment include stable enrolment in 4-year programs, significant decreases in apprenticeship registrations and course completions, and increased enrolment in shorter courses, such as certificate, diploma, or Master's Degree programs.[96] Programs with a more explicit labour market focus, such as pre-employment or job readiness programs, may also be more likely to demonstrate increased demand.

Based on the fall 2009 enrolment survey of post-secondary institutions, preliminary enrolment data for the 2009-10 academic year show annual enrolment growth (FLE) of 3.9% across the system. This is the largest enrolment increase in seven years. A greater understanding of the recessionary impact on enrolment will be apparent as Alberta recovers from the recession and finalized enrolment data for the 2009-10 academic year at the program and credential levels become available.

As indicators of Alberta's economic strength, both Alberta's historical unemployment rates and the historical price of oil (WTI) were correlated against Alberta's historical post-secondary enrolment to provide insight into the predictive power of such economic variables in affecting post-secondary enrolment levels.

Data suggest a moderately strong relationship between the price of oil and enrolment in Alberta's publicly-funded advanced education system. The relationship between post-secondary enrolment and unemployment is the stronger of the two economic variables. These elements will continue to be monitored, particularly as the province moves out of the recession and into a more stable period of economic activity.

Socio-Economic Status & PSE

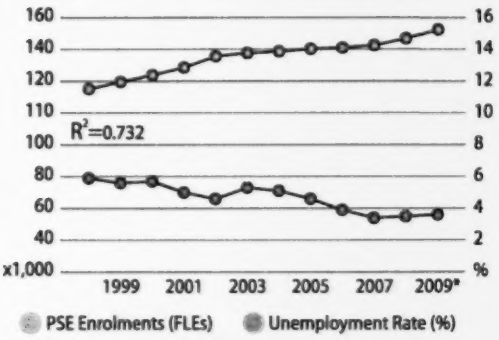
Statistics Canada measures low-income using low-income cutoffs (LICOs), which are based on family income data after government benefits and taxes. The incidence of children living in low-income circumstances ranged from a low of 9% in Prince Edward Island to a high of 26% in British Columbia in 2007. In Alberta, a total of 12% of children lived in low-income circumstances.[97] A complement to the LICO measure, the Market Basket Measure (MBM) assesses low-income based on the cost

of a specified basket of goods and services. Using the MBM, in 2007, about 7.4% of Albertans could be considered low-income. The proportion was higher for children (under 18 years), at 9.0%.[98]

Living in low-income circumstances may hinder a child's ability to perform well in school, limit educational attainment, and reduce the ability or willingness to participate in post-secondary education.

In collaboration with Alberta Education, AET is beginning work on a project to assess the high school to post-secondary transition patterns and post-secondary participation rate of learners from lower-income families. A final report is anticipated in early 2011.

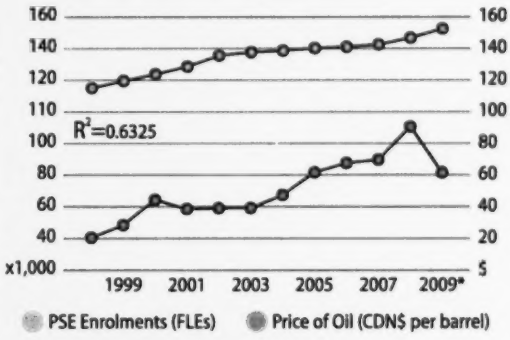
Unemployment and Post-secondary Enrolment, Alberta



Note: *2009-10 enrolment figures are preliminary.

Sources: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS), Statistics Canada - Labour Force Survey

Oil Price and Post-secondary Enrolment, Alberta



Note: *2009-10 enrolment figures are preliminary.
Average annual oil prices are presented in constant 2002 Canadian dollars.
Oil prices (WTI) were converted from US dollar figures into Canadian dollars using the yearly exchange rate average and then adjusted using Canada's Consumer Price Index.

Sources: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS), Energy Information Adminstration (EIA)

LABOUR MARKET SHORTAGES

The availability of sufficient numbers of people with the right skills is integral to Albertans' prosperity. Growth in Canada's working age population has slowed by more than a third over the past 30 years and is projected to grow at an even slower rate moving forward.[99]

Only 7% of firms reported labour shortages in the final quarter of 2009, compared to 36% before the start of the recession in Canada.[100] Even though Alberta's population has been growing faster than other provinces, has the highest rate of in-migration, and is emerging from a recession, its historically low unemployment rate means that some industries continue to see labour market shortages.

From 2009-19, Alberta's labour market is projected to grow by approximately 349,000 workers at an average annual rate of 1.5%. A net increase of 272,000 workers is expected to join the labour force, as supply increases at an annual rate of 1.1%. During the same period, Alberta could experience a labour shortage of about 77,000 workers;[101] over 44,000 (about 60%) of these are anticipated to require post-secondary education. Over the 2009-19 forecast period, Alberta Employment and Immigration (AEI) projects that occupations related to the trades and health major fields of study are expected to have the greatest labour shortages.[102]

Alberta Employment and Immigration (AEI) annually produces Alberta's Occupational Supply Outlook model (AOSOM). The model forecasts Alberta's labour market shortages for 140 occupational groups over a ten-year period. The educational component of the model forecasts the number of enrolments and graduates across 11 major fields of study for different levels of schooling. These forecasts are then translated into occupations where people are expected to look for employment. AET bases its forecast of labour market shortages by program band on AOSOM. Occupations requiring post-secondary education are distinguished and the projected demand for individuals in each occupational category is compared with the projected supply over the projection period. By aligning National Occupational Codes (NOC) with Classification of Instructional Program (CIP) codes, occupational areas with anticipated shortfalls are then categorized into program bands.

The CAPF forecast is used to better align priority access areas with labour market demand, reflective of the fact that most jobs created are anticipated to require some form of post-secondary education. The projected surplus of graduates is based on the number of graduates Alberta's advanced learning system has the capacity to support over the forecast period.

In its 2009-2019 forecast, AEI expects the most significant labour market demand to be for graduates with skill levels at both ends of the educational spectrum – those requiring management skills, and those requiring only on-the-job training. The majority of Albertans tend to fall somewhere in between, with most Albertans having post-secondary education at the certificate, diploma, or Bachelor's/Applied Degree levels. This emphasizes the need for Albertans to not only pursue post-secondary education, but to pursue higher-level studies at the graduate and professional levels.

At the program band level, the majority of labour market shortages are forecasted for graduates from the Trades and Technology (30.3%), Health Sciences (27.5%), Business (16.3%), and Physical, Natural, and Applied Sciences (14.9%) program bands. Based on Alberta's projected post-secondary enrolment by program band over the 2009-19 period, the greatest shortages will be in the same areas.

Forecasted Employment Growth by Skill Level, Alberta 2009-19

Occupational Grouping	Average Annual Growth 2010-19
Management	2.5%
Requiring University Education	1.8%
Requiring College Education or Apprenticeship Training	2.3%
Requiring High School Only	2.2%
Requiring On-the-Job Training Only	2.5%

Source: Alberta Employment and Immigration, 2010 - Alberta Occupational Demand Outlook 2009-19

Comparing each program bands' proportion of the anticipated labour market shortage with the system's enrolment mix helps explain the province's labour market shortages breakdown. For example, while over 27.5% of expected labour market shortages are expected to occur in the Health Sciences, a total of 9.0% of the post-secondary system's enrolment growth over the 2009-19 period is expected to occur in this program band. The majority of enrolment is concentrated in the Language Arts, Social Sciences, Arts, and Humanities program band, which is expected to have a labour market surplus of graduates over the 2009-19 period – even when recognizing that a significant proportion of the labour market shortages in the Business program band is likely to be filled by these graduates.

The post-secondary system must respond to both learner and labour market demand. Greater balance in the system's responsiveness

would help alleviate the province's anticipated labour market shortages and support successful labour market outcomes for graduates of Alberta's advanced learning system.

Labour Market Demand Forecast byProgram Band, 2009-19

Program Band	Projected Labour Shortage 2009-19		Projected Enrolment Growth (FLE) 2009-19		Projected Surplus/ (Shortfall)
	#	% of Total	#	% of Total	
Trades & Technology	13,345	30.3%	1,300	9.0%	(12,045)
Health Sciences	12,105	27.5%	1,300	9.0%	(10,805)
Business	7,188	16.3%	1,878	13.0%	(5,310)
Physical, Natural, & Applied Sciences	6,558	14.9%	2,167	15.0%	(4,391)
Languages, Social Sciences, Arts, & Humanities	2,827	6.4%	4,767	33.0%	1,940
Recreation	1,065	2.4%	289	2.0%	(776)
Education	766	1.7%	867	6.0%	100
Legal & Security	210	0.5%	578	4.0%	368
Preparatory & Basic Upgrading	n/a	n/a	1,300	9.0%	n/a
All Program Bands	44,064	100%	14,445	100%	(30,919)

Notes: Rows may not total due to rounding.
Sources: Alberta Employment and Immigration, Alberta Advanced Education and Technology - *In-Sector Model*

Chapter Summary:

- While still feeling the effects of the recession, Alberta is emerging and entering a period of economic recovery. A return to a more stable period of economic growth is expected.
- Increasing the post-secondary participation and outcomes of under-represented groups is vital to ameliorating Alberta's current and future labour market needs, particularly as these are some of the few growing segments of the population.
- In Alberta, post-secondary participation and economic strength are linked. Albertans may delay further studies in order to take advantage of labour market opportunities, with greater numbers choosing to return to or remain in school in times of economic downturn.
- The majority of future labour market shortages will be filled by individuals with a post-secondary education.
- The largest anticipated labour market shortages are forecasted in the trades, health sciences, business, and physical, natural, and applied sciences program bands. While increasing access in these priority program areas is important, Alberta does not have the population base to meet projected labour market demand.
- Alberta will be reliant on migration to the province to help ease projected labour market shortages.

CHAPTER THREE: POST-SECONDARY ENROLMENT

A highly educated population is linked to the health, vibrancy, and openness of Alberta's society. The province's level and composition of post-secondary enrolment is a defining factor in its ability to meet current and projected labour market shortages, and create the economic foundations necessary for success in the knowledge-driven economy.

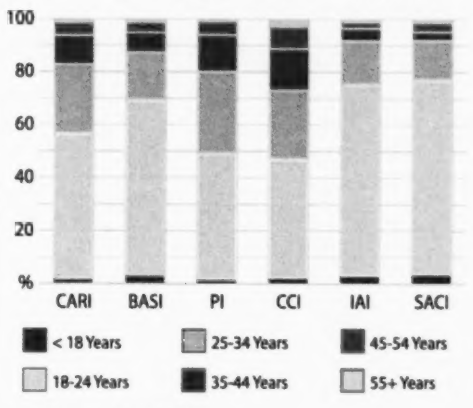
SYSTEM OVERVIEW

At the system level, enrolment in Alberta's post-secondary institutions has steadily increased over the past decade. Reported enrolment figures (FLE) show an average increase of 2.49% over the past ten years. Preliminary enrolment reports for the 2009-10 academic year estimate an annual system-level enrolment increase of 3.9% from the previous year (institutions only report preliminary enrolment data at the aggregate level).

Enrolment growth over the 2007-08 to 2008-09 period and the 2008-09 to 2009-10 forecast period has increased more than two-fold compared to the previous five years. Coinciding with the economic downturn, it is likely that a number of Albertans have chosen to remain in or return to post-secondary education rather than attempt to enter the labour market full-time. The majority of learners in Alberta's post-secondary system are between the ages of 18-34 years – the prime post-secondary attending cohort.

While, at the system level, enrolment has been steadily increasing, the rate of enrolment growth varies across programs, institutions, and regions. At the service region level, FLE enrolment growth varies from a high of 8.3% average annual growth in the Northern Lakes Region[103] to a low of -2.0% in the Keyano Region. The Northern Lakes Region also leads the way in headcount enrolment growth, posting average annual growth of 10.6% over the 2004-05 to 2008-09 period.[104] The Lethbridge Region posts the lowest headcount enrolment growth levels, with negative growth of -2.0% over the past five years.

Enrolment (Headcount) by Age Group and Sector, 2008-09

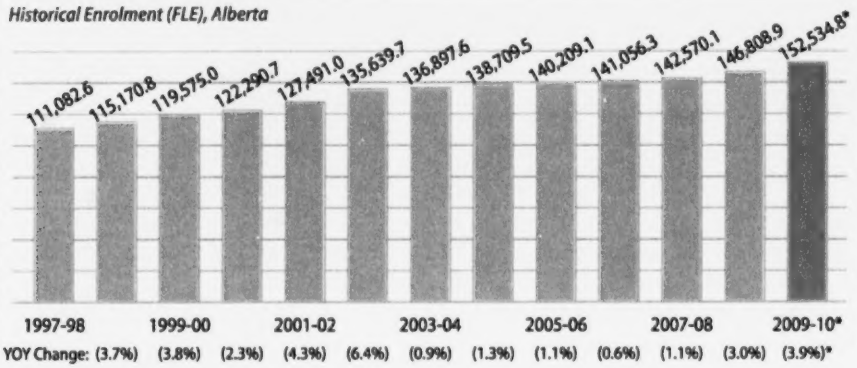


Notes: Does not include the Banff Centre.
In 2008-09, a new methodology for counting unduplicated headcounts was introduced, focusing on the Alberta Student Number (ASN), reducing the incidence of double counting - values listed will not match those previously reported.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

Differences in headcount and FLE enrolment trends within an institution or region can provide insight into the types of demand pressures that exist. For example, a rise in headcount enrolment corresponding with a decrease in FLE enrolment could point to the need for more flexible, course-by-course programming, as more people look to attend post-secondary on a part-time basis. The Portage Region, for example, shows strong average annual headcount enrolment growth (2.8%), but also shows negative FLE growth over the 2004-05 to 2008-09 period (-1.5%).

Historical Enrolment (FLE), Alberta



Notes: *Preliminary. YOY = Year over Year.
Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS), Preliminary Enrolment Survey

Historical Enrolment by Service Region (FLE - Attending At)

Geographic Service Region	2004-05	2005-06	2006-07	2007-08	2008-09	Average Annual Increase
Northern Lakes Region	759.0	863.5	777.9	860.4	1,020.2	8.3%
Calgary Region	47,429.0	47,636.0	48,567.9	48,708.7	50,977.9	1.8%
Edmonton Region	59,516.5	60,687.4	61,019.4	62,258.6	63,649.6	1.7%
Lakeland Region	2,057.8	1,938.1	1,778.2	1,928.0	2,051.1	0.2%
Central Region	5,342.5	5,298.5	5,233.3	5,215.2	5,285.9	-0.3%
Lethbridge Region	10,927.1	10,928.3	10,675.0	10,606.7	10,503.9	-1.0%
Medicine Hat Region	2,456.1	2,415.1	2,365.7	2,347.1	2,312.6	-1.5%
Portage Region	1,050.0	1,069.5	979.5	910.8	979.6	-1.5%
Grande Prairie Region	1,386.5	1,347.2	1,262.4	1,251.1	[illegible]	-1.7%
Keyano Region	1,322.0	1,282.8	1,223.4	1,290.2	1,2[illegible]	-2.0%
Athabasca University	6,462.9	6,742.5	7,183.7	7,193.3	7,525.9	3.9%
Alberta	138,709.5	140,209.1	141,056.3	142,570.1	146,808.9	1.4%

Note: Enrolments reported by Geographic Service Region are determined by institutions' home campus location. Includes the Banff Centre.
Source: Advanced Education and Technology - Learner and Enrolment Reporting System, Banff Centre - Enrolment Report

Historical Enrolment by Service Region (Headcount - Attending At)

Geographic Service Region	2004-05	2005-06	2006-07	2007-08	2008-09	Average Annual Increase
Northern Lakes Region	1,164	1,354	1,401	1,565	1,734	10.6%
Central Region	8,918	9,572	10,683	10,591	10,455	4.2%
Portage Region	2,748	2,842	2,808	2,773	3,062	2.8%
Keyano Region	2,380	2,401	2,446	2,537	2,658	2.8%
Calgary Region	80,931	84,098	84,396	84,906	88,061	2.1%
Edmonton Region	88,993	90,330	92,582	93,589	95,946	1.9%
Lakeland Region	7,591	7,407	6,862	8,067	7,713	0.8%
Grande Prairie Region	2,278	2,345	2,229	2,298	2,249	-0.3%
Medicine Hat Region	5,473	5,714	5,751	5,570	5,255	-0.9%
Lethbridge Region	16,279	15,987	15,600	15,403	15,034	-2.0%
Athabasca University	32,034	34,187	37,219	37,876	38,543	4.8%
Alberta	240,749	248,075	254,458	257,653	264,291	2.4%

Note: Enrolments reported by Geographic Service Region are determined by institutions' home campus location. Includes the Banff Centre.
Source: Advanced Education and Technology - Learner and Enrolment Reporting System, Banff Centre - Enrolment Report

Program Completers

A program completer is an individual who has completed all of the necessary requirements of his program and is awarded a parchment (when offered by the program). Individual institutions determine whether students have completed necessary program requirements for graduation. Students attending Alberta's post-secondary institutions may be enrolled in more than one program and receive multiple parchments in the same academic year.

In 2008-09, the greatest number of parchments was awarded in the Health Sciences program band (8,330), followed by Business (6,727) and Languages, Social Sciences, Arts, and Humanities (6,555). The overwhelming majority of parchments awarded were Bachelor or Applied Degrees (16,186).

Unduplicated Graduates of Parchment Programs by Program Band and Credential, 2008-09

Program Band	Certificate/ Certificate Post-Basic	Diploma/ Diploma Post-Basic	Bachelor/ Applied Degree	Certificate Post-Degree	Diploma Post-Degree	Master's Degree	Doctoral Degree	All Credentials
Business	887	2,510	2,712	–	172	409	18	6,683
Education	233	20	2,041	–	36	342	46	2,718
Health Sciences	2,811	1,897	2,840	–	26	654	92	8,287
Languages, Social Sciences, Arts, & Humanities	544	1,477	4,051	–	–	361	72	6,492
Legal & Security	416	434	436	–	–	18	–	1,302
Physical, Natural, & Applied Sciences	282	901	3,464	–	–	912	337	5,896
Preparatory & Basic Upgrading	–	–	–	–	–	–	–	–
Recreation	28	105	527	–	–	38	11	707
Trades & Technology	1,323	2,040	33	–	–	19	–	3,415
All Program Bands	6,460	9,372	15,747	–	235	2,749	576	35,038

Notes: Values less than five have been suppressed and are indicated by (–).
Table does not include data from the Banff Centre.
Some values above may not reconcile to future data queries due to ongoing work with Statistics Canada on CIP codes.
Summing the rows will not equal the provincial total, as students may have received more than one parchment.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

Private Vocational Training

Alberta's private vocational training system is composed of 154 institutions, which collectively offered over 800 licensed programs to about 9,300 students in 2008-09. These institutions provide specific, focused, occupational training in fields with viable employment opportunities. Licensed programs are offered in a wide variety of fields, such as acupuncture, emergency medical services, massage therapy, business administration, esthetics, and multimedia, and are part of the array of educational choices available to students in the province.

AET's Private Vocational Training Branch licenses and monitors vocational training programs offered by private institutions in accordance with the *Private Vocational Training Act* and Regulation. This legislation allows private institutions to participate in Alberta's post-secondary education system and provides consumer protection to students enrolled in licensed programs.

As part of the application and licensing process, vocational providers are required to demonstrate industry support for the existence of labour market demand for graduates, the

relevance of curriculum, appropriateness of admission requirements, and suitability of instructors' qualifications. If there is a professional body that regulates the field, its requirements need to be met prior to applying for training. Institutions offering licensed programs must remain in compliance with the *Private Vocational Training Act* and Regulation in order to maintain their license.

In terms of performance outcomes, all private vocational institutions offering licensed programs report their graduation rates (the percentage of students who graduated from a program, compared to the number of students who were expected to graduate, during the reporting period) and job placement rates (the percentage of job seeking graduates who found related employment during the reporting period) to AET on an annual basis. In 2008-09, the overall graduation rate for Alberta's private vocational institutions was 78% and the job placement rate was 84%.

POST-SECONDARY PARTICIPATION

Alberta's post-secondary participation rate is influenced by a variety of factors, such as the availability of job opportunities, the rate of population growth, and the capacity of the system to accommodate demand. Alberta's strong labour market is considered to be a key factor in Alberta's comparatively low post-secondary participation rate among its 18-34 year old population – the prime post-secondary attending age group. This age group is also key for the province in terms of interprovincial in-migration – a key source of Alberta's workforce and population growth.

The majority of interprovincial migrants come to Alberta to work, and are already in possession of the skills and training they need to participate in Alberta's labour market. Since the post-secondary participation rate is calculated by dividing the number of 18-34 year old students attending post-secondary education (headcount enrolments) into the population base, a greater rate of population growth can effectively lower the post-secondary participation rate despite increasing enrolment levels.

With the Canadian average holding steady from the previous year at around 22%, Alberta posted a post-secondary participation rate of 16.9% for its 18-34 year old population. Over the past decade, Alberta's post-secondary participation rate has hovered between the 16-19% range. Across the rest of the country, rates range from a high of 24.7% in Quebec and 24.5% in Ontario, to 18.1% and 17.3% in New Brunswick and Saskatchewan respectively in 2009.[105,106]

Post-secondary Regional Service Rate, 18-34 Years

Geographic Service Region	2006-07	2007-08	2008-09
Calgary Region	19.8%	19.1%	19.2%
Central Region	11.4%	11.1%	11.0%
Edmonton Region	23.7%	23.2%	22.9%
Grande Prairie Region	6.1%	6.0%	5.8%
Keyano Region	10.0%	9.7%	9.5%
Lakeland Region	31.6%	35.3%	34.6%
Lethbridge Region	32.3%	31.2%	30.0%
Medicine Hat Region	14.3%	13.7%	12.9%
Northern Lakes Region	4.9%	5.4%	5.9%
Portage Region	10.0%	9.5%	10.3%

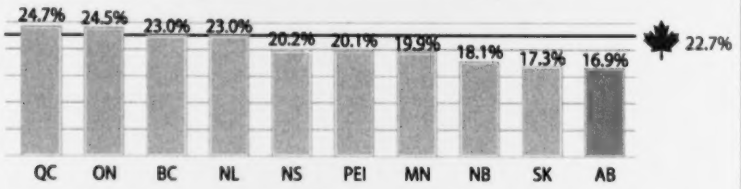
Notes: Students attending at multiple locations are counted at each location. Athabasca University (AU) is not included in any particular service region. Data do not include the Banff Centre.

Sources: Alberta Finance and Enterprise, Statistics Canada, Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

The regional service rate compares a service region's 18-34 year old population with the number of 18-34 year olds (headcounts) attending publicly-funded post-secondary institutions within that region, providing an indication of post-secondary participation at the regional level. In 2008-09, the Lakeland

Region had the highest regional service rate, at 34.6%. The Northern Lakes Region had the lowest regional service rate in the 2008-09 academic year, at 5.9%.

Post-secondary Participation Rate, 18-34 Years, Canada and Provinces, 2009



Source: Statistics Canada - Labour Force Survey (Custom Tabulation)

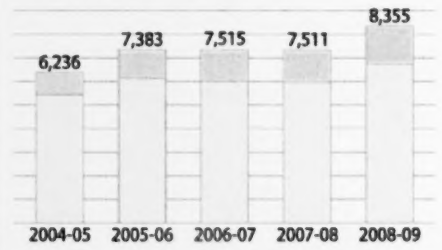
ABORIGINAL LEARNERS

Figures relating to Aboriginal Albertans enrolled in post-secondary education are sourced from students self-declaring their Aboriginal status at the time of application. Individual students have the option to self-declare their status when applying for a post-secondary program one year and not self-declare their status when applying for another post-secondary program in another year or institution. Individuals' Aboriginal status does not automatically travel with them between the K-12 and post-secondary systems, or within the post-secondary system. Due to this reliance on self-identification and a lack of available data on students attending Aboriginal Colleges,[107] the number of Aboriginal learners attending post-secondary education is likely understated.

The number of Aboriginal students enrolled in Alberta's publicly-funded post-secondary institutions has steadily increased from 6,236 students in 2004-05 (the first year of data collection) to 8,355 in 2008-09. Over the five year period, the proportion of Aboriginal students enrolled has remained stable, at about 3.0% of the total student population.

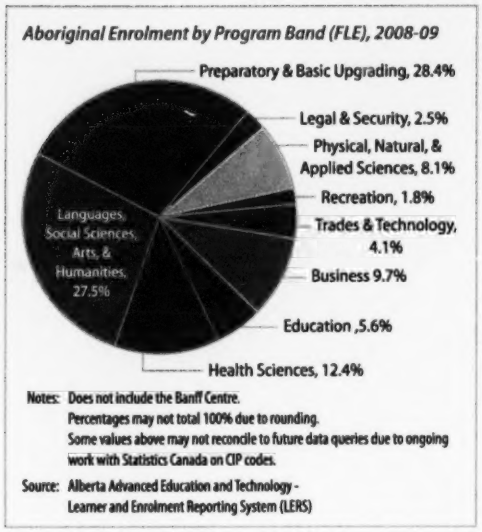
The majority of Aboriginal learners are enrolled in programs belonging to the Preparatory and Basic Upgrading program band (28.4%), followed by Languages, Social Sciences, Arts, and Humanities (27.5%), and Health Sciences (12.4%). Consistent with the strong enrolment in Preparatory and Basic Upgrading programs, most Aboriginal learners are enrolled in programs where a parchment is not awarded upon completion of program requirements (35.5%). These include programs such as open studies, academic upgrading, employability, and job readiness.

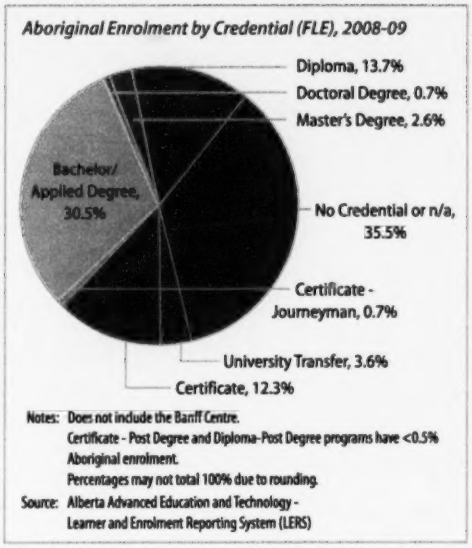
Aboriginal Post-secondary Enrolments (Headcounts)



Notes: Aboriginal students self-identify via a checkbox on post-secondary application forms. Data may underestimate Aboriginal enrolments.
Data do not include the Banff Centre, as they do not report via LERS.
Data for 2004-05 forward have been restated with new headcount methodology.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)


Aboriginal Enrolment by Program Band (FLE), 2008-09
Preparatory & Basic Upgrading, 28.4%
Legal & Security, 2.5%
Physical, Natural, & Applied Sciences, 8.1%
Recreation, 1.8%
Trades & Technology, 4.1%
Business 9.7%
Education ,5.6%
Health Sciences, 12.4%
Languages, Social Sciences, Arts, & Humanities, 27.5%
Notes: Does not include the Banff Centre.
Percentages may not total 100% due to rounding.
Some values above may not reconcile to future data queries due to ongoing work with Statistics Canada on CIP codes.
Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)


Aboriginal Enrolment by Credential (FLE), 2008-09
Diploma, 13.7%
Doctoral Degree, 0.7%
Master's Degree, 2.6%
Bachelor/ Applied Degree, 30.5%
No Credential or n/a, 35.5%
Certificate - Journeyman, 0.7%
University Transfer, 3.6%
Certificate, 12.3%
Notes: Does not include the Banff Centre.
Certificate - Post Degree and Diploma-Post Degree programs have <0.5% Aboriginal enrolment.
Percentages may not total 100% due to rounding.
Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

APPRENTICESHIP

According to Census 2006, almost 12% of Canada's labour force has a background in the skilled trades obtained either through apprenticeship, a trade certificate, or a trade diploma. In Alberta, the proportion was also 12% in 2006.[108]

Although Alberta has about 10% of Canada's labour force, Alberta employers train more than 20% of the country's apprentices.[109] Alberta has produced more tradespeople with an Interprovincial Standards Red Seal than any other jurisdiction in Canada.[110]

Alberta not only trains a significant proportion of Canada's apprentices, but has historically attracted those who have completed their training elsewhere. Alberta's strong economy has consistently attracted Canadian apprentices, as they move to Alberta for improved job prospects, more benefits, or higher pay. Completing an apprenticeship in Alberta and gaining local work experience can be advantageous to those looking to access full-time or permanent employment, or settle permanently in the province.[111] According to results from the most recent National Apprenticeship Survey (NAS) in 2007, nearly half (45%) of all apprentices who completed their training in Canada and moved to another province from 2002 to 2007 moved to Alberta. Nearly one-third (32%) of these migrants was from Atlantic Canada, mirroring the general migration pattern from Atlantic Canada to Alberta over the period. This was followed by Saskatchewan (26%), British Columbia (15%), Ontario (12%), and Manitoba (10%).[112]

Most apprenticeship completers[113] migrating to Alberta from 2002-07 had studied either a metal fabrication trade (30%) or a motor vehicle and heavy equipment trade (26%) – trades that saw significant job losses in central and eastern Canada in the first decade of the new millennium. This does not necessarily mean that the outlook for these sectors was better in Alberta. About 52% of apprentices moving to Alberta were not working in their trade. A significant proportion of these apprenticeship completers may have moved to Alberta to work in other sectors – for example, about 42% of migrant apprenticeship completers worked in construction.[114]

Able to attract tradespeople with its strong economy, there is evidence that Alberta was able to retain them: over 90% of apprentices registered in Alberta by 2004 remained residents of the province in 2007.[115]

The recent recession has slowed the number of tradespeople – and migrants generally – coming into Alberta, with the province showing a 68.2% decrease in interprovincial migration from 2008-09. With the strength of its economy so tied to in-migration, it will be important to monitor the ability of the post-secondary system to train sufficient numbers of apprentices in order to meet demand.

Despite the recent economic downturn, however, Alberta continues to have one of the strongest economies in Canada, with unemployment and labour market participation rates better than the Canadian average. As apprentice migrants to Alberta are more likely to be single, male, and under 29 years of age,[116] a strong economic base with good depth of job and training options will be important elements in keeping these migrants in Alberta for the long-term.

Alberta's Apprenticeship and Industry Training System: Background

In Alberta, tradespeople are certified through an industry-driven apprenticeship and industry training system, using a combination of on-the-job training and work experience, and technical training. Collaboration among industry, government, and training providers helps to ensure that the apprenticeship and industry training system is up-to-date and responsive to the needs of learners, industry, and the economy. AET administers the apprenticeship and industry training system and arranges with training providers for the technical training component. Because the system is industry-led, apprenticeship programs have consistent and standardized training course content across institutions. This allows apprentices to take different periods of technical training at different institutions if they choose. Through the Apprenticeship and Industry Training Board (the board), provincial and local apprenticeship committees, occupational committees, employers, and employees provide direction to the system.

Alberta has 50 designated trades and nine designated occupations. A major difference between a designated trade and a designated occupation is the legislated requirement for the GOA to provide an apprenticeship program (including technical training) for designated trades. There is no such requirement for designated occupations.

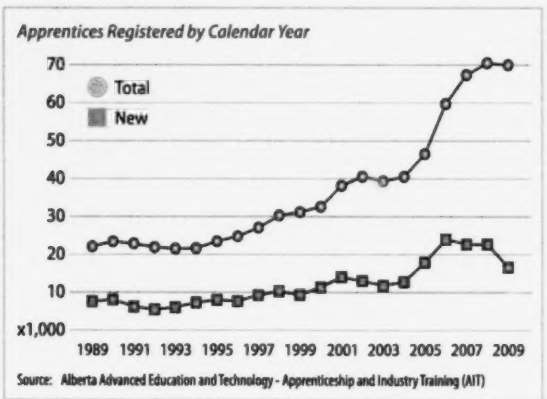
Most apprenticeship programs in the designated trades are three to four years in length, consisting of both on-the-job and technical training. Training begins when an apprentice finds and is hired by an employer. The employer is responsible for the apprentice's wages and on-the-job training. About 80% of an apprentice's time is spent on-the-job under the guidance of a certified journeyperson or qualified tradesperson, and the other 20% in technical training provided by a public post-secondary institution or private provider.

There are a variety of ways an apprentice can participate in technical training. Technical training is often delivered through "block release", where the apprentice spends a block of time (typically eight weeks per year) in the classroom. In some trades, technical training is offered in other formats, such as Competency-Based Apprenticeship Training, Weekly Apprenticeship Training System, mobile delivery, or on-site classes at the workplace. Some apprentices may prefer to obtain study material, or Individual Learning Modules (ILMs), to learn at their own pace and challenge the industry exam.

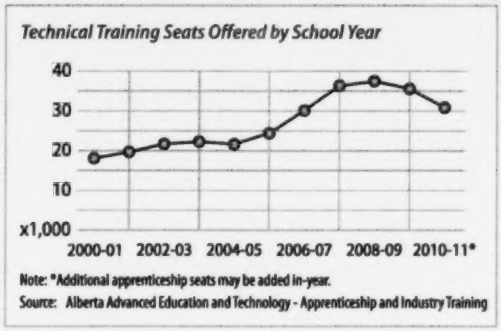
Apprenticeship Registrations

A registered apprentice is a person participating in an apprenticeship program under a contract of apprenticeship that is registered with AET. Fluctuations in apprenticeship numbers tend to follow the economic cycle, where periods of decline or growth are reflected in the number of registered apprentices.

While, at the Canadian level, registration in apprenticeship programs has increased to record levels, the number of people completing an apprenticeship program has changed very little over the past several decades. In 2005, a total of 245,180 individuals were registered in apprenticeship programs across Canada. While this represents an increase of 52% since 2000, the number of individuals who completed an apprenticeship program increased only 12% over the same period.[117]



Apprenticeship registrations in Alberta over the past decade have been strong, with most years showing double-digit increases in both the number of total apprentices registered and the number of new apprentices registered. Since 2000, Alberta has seen an almost 115% increase in the number of registered apprentices. In 2009, the overall number of registered apprentices decreased for the first time since 2003, due to a decline in the number of new registrants from 22,668 to 16,594 – a decrease of 26.8%.


Technical Training Seats Offered by School Year
40
30
20
10
x1,000
2000-01 2002-03 2004-05 2006-07 2008-09 2010-11*
Note: *Additional apprenticeship seats may be added in-year.
Source: Alberta Advanced Education and Technology - Apprenticeship and Industry Training

Technical Training Seats Offered

AET works with post-secondary institutions to enhance system access and responsiveness. Institutions have demonstrated some short-term elasticity in their ability to train apprentices in response to both learner and industry demand. Alberta's Polytechnical and Comprehensive Community Institutions (CCIs) provide the bulk of apprenticeship technical training in the province.

Apprenticeship technical training seats are scheduled at institutions according to the:

- Number of registered apprentices eligible for training in each region, trade, and period.
- Anticipated number of new apprentices.
- Employer/apprentice preferences.
- Availability of training facilities.
- Current and historical class-fill rates.
- Number of apprentices scheduled to attend current classes who will be progressing to the next level.

It is normal for additional seats to be added during the year if required, as the apprenticeship and industry training system has a continuous intake and continuous graduation system. The goal is to develop the highly trained workforce needed to sustain Alberta's economic growth now and into the

future.

In 2009-10, a total of 35,611 technical training seats were offered in Alberta – about 98.2% at Alberta's publicly-funded post-secondary institutions. This represents the first time in the past decade that the number of seats offered decreased (-4.8%) from the previous year. For the 2010-11 academic year, the number of seats currently offered is 30,861 (this number may fluctuate based on demand throughout the year). This is a decrease of 13.3% from the previous year, but more comparable to the number of seats offered prior to the economic boom in the mid-2000s.

While technical training seats in Edmonton and Calgary may be oversubscribed in the largest trades, there are often available seats at institutions elsewhere in the province. In 2008-09, the board asked AET to conduct a study on why some apprentices choose to attend technical training outside their home area. Top reasons included the location of the institution (32%), availability of seats (20%), the size of the institution or town (19%), institutional reputation (17%), and the institution's amenities and conveniences (15%).[118] The board used the results of the study to develop a technical training seat strategy to help apprentices complete their training, consider all available training options, and encourage employers to assist apprentices in attending training.

In 2009-10, the majority of technical training seats were offered in the Edmonton (42.1%) and Calgary (30.4%) regions.[119]

Diversity in the Trades

According to the 2007 NAS, Alberta's typical apprentice is a single male, under 35 years old, non-Aboriginal, non-immigrant, non-visible minority, with no history of disability, and is apprenticing in a red seal designated trade.[120]

Technical Training Seats Offered by Service Region

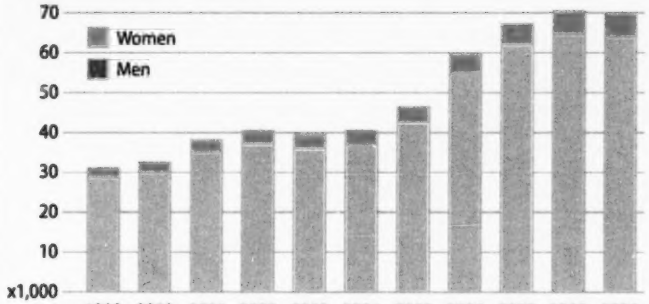
Geographic Service Region	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11*
Edmonton Region	10,296	12,529	14,486	15,080	14,724	13,539
Calgary Region	6,940	8,695	10,658	11,312	10,635	8,628
Central Region	2,644	3,342	4,188	4,133	3,762	3,201
Grande Prairie Region	919	1,172	1,476	1,661	1,480	1,235
Lakeland Region	846	996	1,437	1,283	1,142	960
Lethbridge Region	728	960	1,315	1,269	1,137	948
Keyano Region	645	748	874	1,040	1,016	960
Medicine Hat Region	508	740	729	679	693	708
Northern Lakes Region	28	72	165	221	214	224
Portage Region	95	146	224	188	184	150
Alberta Total	23,649	29,400	35,552	36,866	34,987	30,553

Notes: * Additional apprenticeship seats may be added in-year.
Figures do not include Delmar College, Marvel College, the Eveline Charles Academy, or other private training providers.
Sources: Apprenticeship and Industry Training, Alberta Advanced Education and Technology

With anticipated labour shortages in the skilled trades, combined with an aging population and the increasing diversity of Alberta's population, the increased attraction and retention of typically under-represented groups into the skilled trades is a viable strategy to both help meet anticipated labour market shortages and support these Albertans in improving their life outcomes.

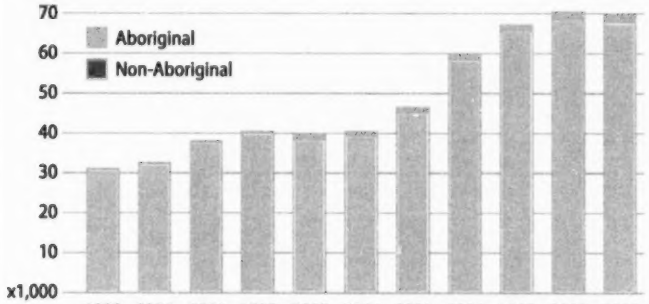
In 2007, 8.5% of the total 42,867 certificates granted to apprentices and trade qualifiers in Canada were to women. This is similar to the 1991 figure of 9%.[121] Alberta follows the Canadian trend, with women comprising about 9% of all registered apprentices in Canada, a figure that has remained stable over the past decade.

Apprentices Registered by Gender



Source: Alberta Advanced Education and Technology - Apprenticeship and Industry Training (AIT)

Aboriginal Apprentices Registered



Note: Aboriginal identity is based on self-identification at the time of application.
Source: Alberta Advanced Education and Technology - Apprenticeship and Industry Training (AIT)

The board is working to foster relationships with organizations that promote women in the trades, including:

- **Women Building Futures (WBF)**: a non-profit organization based in Edmonton that helps attract women into the construction trades, provides pre-trades training, and mentorship.
- **Construction Owners Association of Alberta's (COAA) Opportunities for Women in Construction**: a group working on developing best practices for increasing the number of women employed and retained in the industrial sector. [122]

Based on self-identification at the time of application, Aboriginal Albertans comprised 3% of registered apprentices in 2009. This is a three-fold increase from a decade earlier and consistent with their proportion of the Albertan population. In recent years, AET has supported a number of targeted initiatives designed to encourage Aboriginal Albertans to participate in the trades, including:

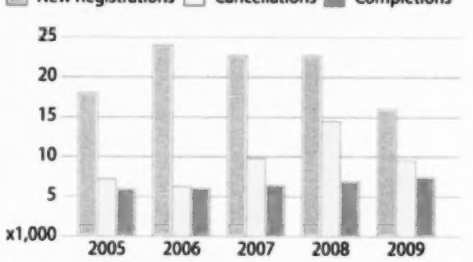
- **Apprenticeship Preparation for Aboriginal People**: an essential skills project developed to assist Aboriginal people who need workplace skills to participate in apprenticeship programs. A number of these graduates have become registered Alberta apprentices.
- **Aboriginal Apprenticeship Initiative**: launched on April 1, 2009, a program to assist Aboriginal people to enter and complete apprenticeship programs. As of March 2010, more than 230 Aboriginal apprentices were registered through this initiative.

Completions

In Alberta in 2008-09, a total of 77% of apprentices who completed the first year of their program (including on-the-job training and work experience, technical training and exams) completed their apprenticeship within two years of the earliest completion date. [123]

In 2006, AET and the board conducted a study to better understand why some apprentices – particularly in their first training period – discontinue their training. [124]

New Apprenticeship Registrations, Cancellations, and Completions, Alberta



Source: Apprenticeship and Industry Training, Alberta Advanced Education and Technology

The study resulted in the formation of an Apprenticeship Completion Rate Improvement Plan. The Plan involves:

- Conducting a pilot project with apprentices who withdrew in their final period to determine the reasons for withdrawal and to offer assistance to complete.
- Visiting all first year apprentices during their first week of technical training to tell them about apprenticeship and identify who they should contact if any problems arise.
- Encouraging employers to retain apprentices and to give special support during their first year of technical training through promotional events, literature, and regular contact. [125]

In Alberta, there is evidence that apprentices' level of educational attainment when entering their apprenticeship program has an impact on program outcomes. Those apprentices who had completed high school were more likely to

complete their apprenticeship program in the prescribed program duration, as were those who had pursued or completed post-secondary education.[126]

Apprenticeship training provides value to Albertans, industry, and apprentices themselves. Alberta's completed apprentices consistently find work related to their apprenticeship training. A recent survey of apprenticeship graduates found that three-quarters of respondents who completed their apprenticeship program do work that is directly related to their program, with another 20% finding work that is somewhat related. In addition, about 23% of respondents receive promotions as a result of completing their apprenticeship training.[127] Apprenticeship training can also be an access point to further post-secondary studies, with 72% of respondents anticipating pursuing further training in order to improve their career opportunities.[128]

Employers also receive a return on their apprenticeship investment. In 2008, for every $1 spent on apprenticeship training, a Canadian employer received an average benefit of $1.47 (a net return of $0.47).[129] The benefit to the employer also increases over the course of the apprenticeship, as apprentices become more skilled and knowledgeable – particularly for employers hiring their own apprentices. Almost one-third (30.2%) of employers consider the benefit of training an apprentice to exceed the cost by the end of the second year of the apprenticeship, and just under two-thirds (61.3%) of employers considered a journeyperson they trained as an apprentice to be more productive relative to an external journeyperson.[130,131]

Trade Futures

As Alberta's overall population ages, the skilled trades will be under increasing pressure. The median age of individuals in the skilled trades is steadily increasing, with a significant number of retirements expected over the next decade. Combined with relatively stable completion numbers, a shortage of workers in certain trades are anticipated – within and outside the province.[132,133,134]

FOUNDATIONAL LEARNING

The *Roles and Mandates Policy Framework* identifies two system outcomes (vibrant learning communities and strong learning foundations) that require a strong community-based adult learning system – one that operates in alignment with post-secondary institutions. The importance of community adult learning is also outlined in *Living Literacy: A Literacy Framework for Alberta's Next Generation.*[135]

Community based adult learning contributes towards the vision of Campus Alberta by providing life-long learning opportunities to Albertans in their communities.

Community Adult Learning

AET's Community Adult Learning Program provides funding and other supports to community-based organizations to offer part-time, non-credit adult learning opportunities in Alberta communities.[136] A total of 81 Community Adult Learning Councils (CALCs) and 71 Volunteer Tutor Adult Literacy (VTAL) programs serve Albertans throughout rural and urban Alberta. CALCs and VTALs are the primary providers of English language programs in rural Alberta. CALCs offer programming in Adult Basic Literacy, English or French language learning, Employability Enhancement (e.g., first aid, General Equivalency Diploma), or Community Issues (e.g., crime prevention, farm succession workshops, parenting, etc.). In 2009, a total of 60,938 individuals participated in these courses at a local CALC, with an additional 19,544 learners participating in general interest courses, such as Workplace Hazardous Materials Information System (WHMIS) training or social dance.

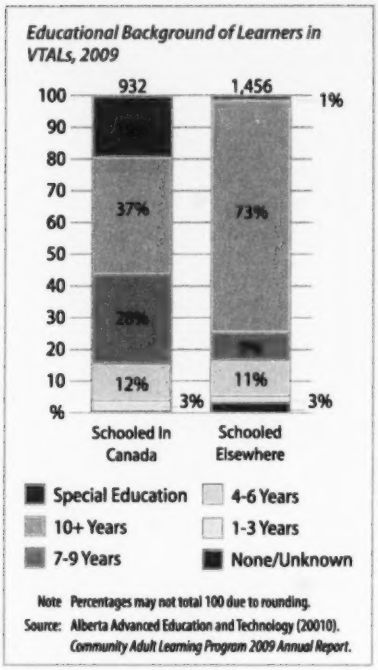
Participation in Community Adult Learning, 2009

Program Area	Learners/ Registrants
Community Issues	27,633
General Interest*	19,544
Employment Enhancement	17,562
English Language Learning	10,174
Adult Basic Literacy	5,348
French Language Learning	221
Total	80,482

Note: *General interest programs are offered on a cost-recovery basis.
Source: Alberta Advanced Education and Technology (2010). *Community Adult Learning Program 2009 Annual Report.*

VTALs provide basic literacy instruction to adults who want part-time, individual, small group, or classroom instruction to improve their literacy, numeracy, or language skills. Of those VTAL learners indicating previous educational experience, the majority had more than ten years of formal education. This is particularly true for learners educated outside of Canada, of whom 73% had ten or more years of formal education, compared to 37% for the Canadian-educated.[137]

Increasing access to literacy and English language programming is a strategy in Alberta's immigration policy framework – *Supporting Immigrants and Immigration to Alberta.* VTALs are providing an important source of English language learning and foundational skills building for immigrant Albertans – over two-thirds (78%) of VTAL learners are immigrant Albertans. With the years of formal schooling they bring to the province upon arrival, community learning opportunities are an important springboard for future employment and educational goals. As most new VTAL participants learn about the program from current participants or tutors, the program is an important access point developed through linkages among immigrant communities.



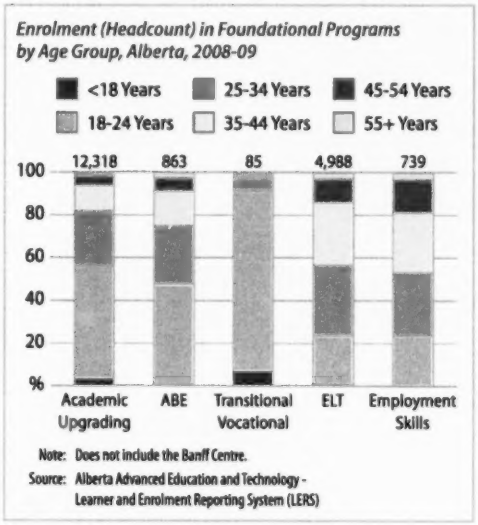
In 2009, most VTAL learners were between the ages of 20-35 years (46%), followed by 36-55 years (39%). About 3% of VTAL learners were aged 19 years or younger. Over 59% of VTAL learners were female.

Foundational Learning in the Post-secondary System

Alberta's post-secondary institutions also play a key role in community education and foundational learning. Institutions partner with local communities through regional stewardship models to provide credit post-secondary programming. Many institutions have established satellite campuses and learning centres in several different communities to provide expanded access in response to regional needs. Institutions also collaborate via partnerships like Alberta-North and eCampusAlberta.

Foundational programs at post-secondary institutions range from academic upgrading, employment, adult basic education, and English-language training (ELT). Most learners attend these programs at CCIs. In 2008-09, about 78% of ELT enrolments (FLE), 72% of Academic Upgrading, 67% of Transitional Vocational, and all of Adult Basic Education and Employment Skills enrolments were in the CCI sector. A total of 10% of academic upgrading and 33% of transitional vocational enrolments were in the Polytechnical sector, with 17% of academic upgrading and 22% of ELT enrolments in the BASI sector. A small percentage of academic upgrading enrolment was in the IAI sector in 2008-09, at almost 1%.

Over the 2004-05 to 2008-09 period, ELT programs have seen the strongest average annual enrolment (FLE) growth of the foundational learning program categories, at almost 9%. This includes a 26.5% enrolment increase from 2007-08 to 2008-09.[138] Continuing immigration to Alberta from predominantly non-English speaking, non-European countries is an enrolment trend to watch, as new Albertans may require foundational training to improve their skills, enter the workforce, or make optimal use of prior learning.



Enrolment trends in foundational learning programs like academic upgrading and transitional vocational programs show some

relationship to the health of the economy. For example, after posting negative enrolment growth over the previous four years, enrolment in academic upgrading increased by over 20% in 2008-09 as the province entered a recessionary period.[139] Enrolment in employment programs is also linked to economic trends, such as the availability and level of competition for jobs – particularly those requiring lower levels of educational attainment.

STUDENTS WITH DISABILITIES

A key policy direction outlined in *A Learning Alberta*, the *Roles and Mandates Policy Framework*, and previous iterations of the AAPF is to increase access for groups traditionally under-represented in post-secondary education, including individuals with disabilities. AET meets regularly with the Post-Secondary Providers of Services to Students with Disabilities (PSPSSD) group to discuss challenges and opportunities to help ensure that students with disabilities can access and succeed in post-secondary education.

In order to improve data and information on the growing number of students with disabilities seeking support services, in September 2008 AET collaborated with PSPSSD to develop a data collection and reporting process to better track disability services data. Discussions culminated in a plan to collect and report on the number of students accessing disability supports every three to five years. Using 2007-08 as the base academic year, institutions were asked to report on several elements, including the number of students who received services from the disability services office, the number of students who received services and supports for multiple disabilities, the type of services provided (e.g., note taking, tutoring, exam accommodations, advising, work experience, etc.), program enrolments, and program completions.

An initial report was prepared in late 2009 using data from the 2007-08 academic year. Data show that a total of 6,890 students across the province received support services from institutions' Offices for Students with Disabilities (OSD). Overwhelmingly, OSD provide supports to students with learning disabilities, at almost 41% of all students with disabilities in 2007-08. This may, in part, be due to an increasing identification of learning disabilities in the K-12 system, making a smoother transition to post-secondary. A total of 1,556 (28%) of students served by OSD received supports for multiple disabilities.

Of all support services offered by OSD, the most accessed is exam accommodations. Exam accommodations may include actions like providing the exam in an alternate format or allowing the student a longer period of time to complete the exam. In 2007-08, a total of 3,128 students received exam accommodations. This number of exams accommodated has been steadily rising, with 25,300 exams accommodated in the 2005-06 academic year compared to 35,275 exams accommodated in 2007-08. This is an increase of almost 40% over the period. On average, institutions provided about 3,300 hours of exam accommodations, about 2,500 hours of interpreting services, and about 2,000 hours of academic/learning strategies over the 2007-08 academic year. Although exam accommodations are the most frequently used service, other services (such as note taking, tutoring, etc.) may require a greater amount of work hours for OSD.

From 2005-06 to 2008-09, the number of K-12 students coded with a disability increased by

3.5% – for children in Early Childhood Services programming (i.e., Kindergarten, etc.), the figure is 25.6%.[140] There may be increasing pressure on education providers at both the K-12 and post-secondary levels to provide timely educational assessments and accommodations that will ensure smooth transitions from K-12 and successful educational outcomes.

Challenges noted by OSD in the pilot study include serving the increasing numbers of students requiring their services, ensuring adequate staff and equipment resourcing (including addressing staff turn-over), and addressing the needs of the growing pool of students who need academic supports but do not meet the criteria for diagnosis with a disability. With the short formal technical training period for apprentices, providing these students with timely supports can also be a challenge.

AET and PSPSSD are continuing to work together on the report's findings and to improve data collection and reporting for its next iteration.

AET is also working with Alberta Employment and Immigration on improving supports to learners with disabilities. Over the past two years, Alberta Employment and Immigration has conducted an extensive review of its Disability Related Employment Supports (DRES) program. A DRES Framework was developed from the results of the review that identified its strengths, challenges, and recommendations for moving forward. One of the Framework's recommendations was for Alberta Employment and Immigration to work more closely with AET to assist learners with disabilities attending publicly-funded post-secondary institutions in Alberta.

AET and Alberta Employment and Immigration are currently working together to develop a process to support learners with disabilities attending post-secondary institutions that simplifies administration, reduces confusion for learners who have to apply to more than one ministry to cover their funding needs, and maintains individualization. Ongoing work is anticipated to be shared with system stakeholders in late 2010.

Chapter Summary:

- Alberta's post-secondary enrolment has increased steadily over the past decade, with notable increases in demand during the recent period of economic downturn.
- Linked in part to the availability of labour market opportunities, Alberta has the lowest post-secondary participation rate in Canada, with variation among regions of the province.
- Post-secondary participation rates are even lower for under-represented groups. Increasing access and educational outcomes of under-represented groups is necessary.
- The majority of Albertan learners graduate with credentials in the Health Sciences, Business, and Languages, Arts, Social Sciences, and Humanities program bands and study at the Certificate, Diploma, or Bachelor's/Applied Degree levels.
- Moving forward, the skilled trades will face increasing pressure as the median age of tradespeople increases and labour market demand for skilled workers increases.

CHAPTER FOUR: STUDENT FLOWS

Understanding population flows within and without the province is important in anticipating post-secondary demand. The movement of students from outside Alberta into the province is a key consideration, as non-Albertan students comprise large proportions of our in-demand program areas, simultaneously enriching our social spaces and economic potential. Consideration must be given to the movement of Alberta's student populations in terms of how they transition between levels of education and educational providers, and how they move around the province in pursuit of their educational goals.

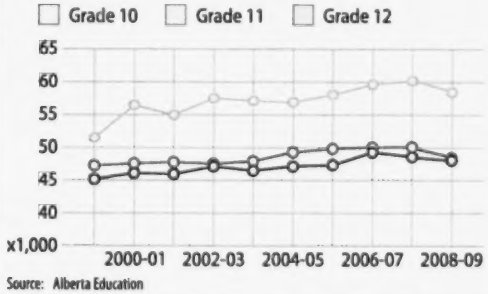
ALBERTA MOVES

High School in Alberta: Enrolment and Transitions

In 2008-09, a total of 154,903 students were registered in high school programs in Alberta. All students enrolled in high school courses from their third year of high school enrolment onward are considered Grade 12 students – this includes those students repeating courses and/or returning for a fourth year or more. This may account for the consistently higher numbers of Grade 12 students compared to the Grade 10 and 11 populations.

While the high school population has steadily increased over the past decade, it is showing signs of stabilization.

High School Enrolment, Alberta



Source: Alberta Education

Approximately 37.5% of Albertan high school students transition directly to post-secondary education within four years of entering Grade 10. As with high school completion rates, outcomes improve as time lengthens, with the transition rate increasing to almost 60% within six years of entering Grade 10. Regional variations mirror those in high school completion, with 4-year transition rates ranging from a low of 26.6% in the Northern Lakes Region to a high of 43.2% in the Lakeland Region.

High School Transition Rate by Service Region, 2008-09

Geographic Service Region	4-Year Rate	6-Year Rate
Calgary Region	39.3%	61.9%
Central Region	33.2%	54.1%
Edmonton Region	37.5%	60.8%
Grande Prairie Region	32.1%	52.5%
Keyano Region	30.1%	57.3%
Lakeland Region	43.2%	65.2%
Lethbridge Region	37.9%	58.8%
Medicine Hat Region	41.7%	63.2%
Northern Lakes Region	26.6%	47.9%
Portage Region	38.3%	57.1%
Alberta	37.5%	59.8%

Notes: Results include students in public, separate, charter, francophone, and private schools. A small number of schools did not have the required information to map to service regions, but are included in the Alberta-level figure.

Source: Alberta Education

Improving transitions between high school and post-secondary education has the potential to increase overall post-secondary participation rates and educational attainment levels, simultaneously helping alleviate shortages of skilled labour.[141]

High School Graduate Mobility

Using the Alberta Student Number (ASN), it is possible to track students as they leave Alberta high schools and move on to post-secondary education. The ASN is the single, unique identifier for all Alberta learners. Every student in Alberta is assigned an ASN once they enrol in either the K-12 or post-secondary levels. This includes non-Albertan Canadian students or international students who move to Alberta to study; upon entering the system, they are assigned an ASN. Once learners are assigned an ASN, it stays with them for the course of their lifelong learning.

Looking at high school graduates who transitioned directly to post-secondary education from high school in fall 2009, most students remained within the region in which they graduated from high school. This, however, was not true of all regions. The majority of high school graduates transitioning directly to post-secondary education in fall 2009 in the Lakeland (32.6%), Northern Lakes (26.4%), and Portage Regions (24.9%) chose to attend post-secondary education elsewhere in the province. Of students who did transition into post-secondary education in these regions, however, the majority came from within the region – this was the case for all service regions.

In every service region, the majority of high school graduates did not transition directly to post-secondary education (61.0%). While it is possible that some of these graduates entered post-secondary education outside the province, it is likely that the majority did not transition into post-secondary education anywhere directly upon graduation. This is consistent with 4-year high school transition rates reported by Alberta Education.

High School Student Transitions, Fall 2009 - Summary Table

Geographic Service Region	Number of High School Graduates	ATTENDING: In Region	ATTENDING: Other Alberta	ATTENDING: *Not Attending in Alberta
Calgary Region	9,933	35.9%	6.0%	58.1%
Central Region	2,712	19.1%	13.5%	67.4%
Edmonton Region	12,006	33.6%	5.8%	60.6%
Grande Prairie Region	804	24.8%	9.5%	65.8%
Keyano Region	488	19.1%	14.3%	66.6%
Lakeland Region	512	7.6%	32.6%	59.8%
Lethbridge Region	1,500	31.1%	7.6%	61.3%
Medicine Hat Region	841	23.2%	18.0%	58.9%
Northern Lakes Region	621	2.7%	26.4%	70.9%
Portage Region	635	7.2%	24.9%	67.9%
Alberta TOTAL	30,052	30.5%	8.5%	61.0%

Notes: *Figures include high school graduates not attending a publicly-funded post-secondary institution in Alberta. May include students attending PSE out-of-province.
Data include only those high school students who transition directly to PSE upon graduation. The number of high school graduates may be understated, as these only represent a snapshot of fall enrolments and may not include those graduates entering apprenticeship programs or those that have a continuous intake. Percentages may not total 100 due to rounding.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)
Alberta Education

High School Student Transitions by Service Region, Fall 2009

REGION OF HIGH SCHOOL GRADUATION (Fall 2009)	REGION OF POST-SECONDARY TRANSITION: Calgary Region	Central Region	Edmonton Region	Grande Prairie Region	Keyano Region	Lakeland Region	Lethbridge Region	Medicine Hat Region	Northern Lakes Region	Portage Region	Athabasca University (AU)	Total (with AU)	Did Not Attend PSE in Alberta	Total Graduates
Calgary Region	3,566 (82.5%)	61 (8.1%)	284 (5.7%)	–	–	–	234 (26.1%)	9 (4.1%)	–	–	–	4,161 (35.5%)	5,772 (31.5%)	9,933 (33.1%)
Central Region	147 (3.4%)	519 (69.1%)	144 (2.9%)	–	–	12 (12.9%)	51 (5.7%)	–	–	–	–	885 (7.5%)	1,827 (10.0%)	2,712 (9.0%)
Edmonton Region	468 (10.8%)	80 (10.7%)	4,038 (81.5%)	34 (12.9%)	7 (7.0%)	18 (19.4%)	67 (7.5%)	8 (3.7%)	–	8 (14.8%)	–	4,734 (40.3%)	7,272 (39.7%)	12,006 (40.0%)
Grande Prairie Region	9 (0.2%)	9 (1.2%)	46 (0.9%)	199 (75.7%)	–	6 (6.5%)	–	–	–	–	–	275 (2.3%)	529 (2.9%)	804 (2.7%)
Keyano Region	14 (0.3%)	–	45 (0.9%)	–	93 (93.0%)	–	7 (0.8%)	–	–	–	–	163 (1.4%)	325 (1.8%)	488 (1.6%)
Lakeland Region	14 (0.3%)	25 (3.3%)	107 (2.2%)	–	–	39 (41.9%)	15 (1.7%)	–	–	–	–	206 (1.8%)	306 (1.7%)	512 (1.7%)
Lethbridge Region	46 (1.1%)	15 (2.0%)	46 (0.9%)	–	–	–	466 (52.0%)	5 (2.3%)	–	–	–	580 (4.9%)	920 (5.0%)	1,500 (5.0%)
Medicine Hat Region	50 (1.2%)	16 (2.1%)	31 (0.6%)	–	–	–	51 (5.7%)	195 (89.9%)	–	–	–	346 (2.9%)	495 (2.7%)	841 (2.8%)
Northern Lakes Region	–	16 (2.1%)	98 (2.0%)	30 (11.4%)	–	–	6 (0.7%)	–	17 (100%)	–	–	181 (1.5%)	440 (2.4%)	621 (2.1%)
Portage Region	7 (0.2%)	10 (1.3%)	118 (2.4%)	–	–	18 (19.4%)	–	–	–	46 (85.2%)	–	204 (1.7%)	431 (2.4%)	635 (2.1%)
Alberta TOTAL	4,321 (100%)	751 (100%)	4,957 (100%)	263 (100%)	100 (100%)	93 (100%)	897 (100%)	217 (100%)	17 (100%)	52 (100%)	–	11,735 (100%)	[illegible]	30,052 (100%)

Notes: Values less than five have been suppressed and are indicated by (–). Row totals may not equal the sum of all columns due to suppression.
Data include only those high school students who transition directly to PSE upon graduation. The number of high school graduates may be understated, as these only represent a snapshot of fall enrolments and may not include those graduates entering apprenticeship programs or those that have a continuous intake.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI), Alberta Education

High School Student Transitions by Program Band, Fall 2009

	REGION OF HIGH SCHOOL GRADUATION										
Fall 2009	Calgary Region	Central Region	Edmonton Region	Grande Prairie Region	Keyano Region	Lakeland Region	Lethbridge Region	Medicine Hat Region	Northern Lakes Region	Portage Region	TOTAL
Business	532	132	377	39	16	31	49	32	10	21	1,239
Education*	59	72	34	18	–	–	7	30	5	–	225
Health Sciences	318	114	389	20	12	26	65	31	18	25	1,018
Languages, Social Sciences, Arts, & Humanities	1,624	238	1,993	107	58	67	212	122	63	77	4,561
Legal & Security	59	16	58	–	–	–	25	18	–	–	176
Recreation	121	38	137	9	–	10	27	6	6	–	354
Physical, Natural, & Applied Sciences	1,169	196	1,335	41	21	37	150	66	39	29	3,083
Preparatory & Basic Upgrading	29	18	162	20	35	11	9	17	15	8	324
Trades & Technology	250	61	249	20	14	18	36	24	22	37	731
TOTAL	4,161	885	4,734	275	163	206	580	346	181	204	11,735

Notes: *Includes only direct-entry Education programs (i.e., University Transfer: Bachelor of Education programs).
Values less than five have been suppressed and are indicated by (–). Totals may not equal the sum of all rows/columns due to suppression.
Data include only those high school students who transition directly to PSE upon graduation. The number of high school graduates may be understated, as these only represent a snapshot of fall enrolments and may not include those graduates entering apprenticeship programs or those that have a continuous intake.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI), Alberta Education

High School Student Transitions by Credential, Fall 2009

	REGION OF HIGH SCHOOL GRADUATION										
Fall 2009	Calgary Region	Central Region	Edmonton Region	Grande Prairie Region	Keyano Region	Lakeland Region	Lethbridge Region	Medicine Hat Region	Northern Lakes Region	Portage Region	TOTAL
Certificate	98	75	172	44	29	28	33	14	27	45	566
Journeyman Certificate	23	21	66	6	–	5	9	6	8	11	155
Diploma	589	177	679	26	26	48	212	96	34	39	1,926
University Transfer	122	281	150	108	25	20	31	95	20	17	869
Bachelor/ Applied Degree	2,817	243	3,376	36	44	88	271	88	65	78	7,106
No Credential	512	88	291	56	39	18	24	47	27	14	1,116
TOTAL	4,161	885	4,734	275	163	206	580	346	181	204	11,735

Notes: Values less than five have been suppressed and are indicated by (–). Totals may not equal the sum of all rows/columns due to suppression.
Data include only those high school students who transition directly to PSE upon graduation. The number of high school graduates may be understated, as these only represent a snapshot of fall enrolments and may not include those graduates entering apprenticeship programs or those that have a continuous intake.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI), Alberta Education

Recognition of Prior Learning

Recognition of Prior Learning (RPL) includes three types of assessment processes that are used to evaluate the knowledge, skills, and attitudes that people have acquired in their lives. These assessment processes are transfer credit, credential recognition, and prior learning assessment and recognition.

Transfer Credit

Transfer is the movement of students among post-secondary institutions based on their holding of transfer credit. Transfer credit is awarded for the successful completion of structured educational activities at a post-secondary institution.

In fall 2008, a total of 11,541 students were admitted to a post-secondary institution in Alberta who had previously attended another institution in the province – an increase of 24.4% from the previous year.[142] Polytechnical institutions showed the largest year-over-year increase in transfer, with a 72% increase in transfer to the sector over fall 2007.[143] The Baccalaureate and Applied Studies sector was the top sending sector in fall 2008.[144]

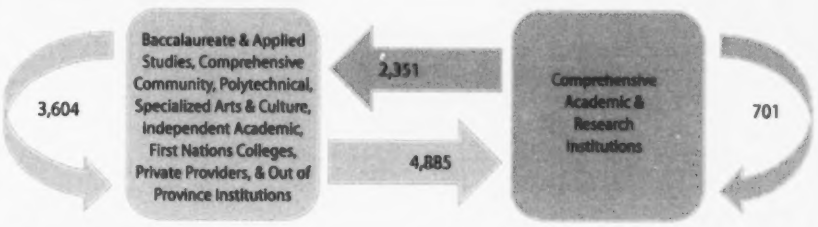
The Alberta Council on Admissions and Transfer (ACAT)[145] is the provincial body responsible for implementing, monitoring, and conducting research on Alberta's transfer system. The Council also maintains the provincial database of transfer agreements that exist between post-secondary institutions, and facilitates working relationships among stakeholders in support of a strong, student-centred transfer system.

ACAT is taking steps to strengthen its relationships with other jurisdictions in support of student mobility. In 2009, ACAT adopted a policy allowing degree granting members of the British Columbia transfer system to apply for ACAT membership.

In addition, ACAT is engaged in a research project examining student mobility within Canada and an environmental scan of interprovincial transfer agreements. The Pan-Canadian Consortium on Admissions and Transfer and the Western Consortium on Admissions and Transfer are heading these initiatives with the assistance of the ACAT Secretariat.

Identifying the need to even further focus on developing and enhancing opportunities for learners to more easily ladder their education and careers and provide more seamless, accessible transfer opportunities for learners, ACAT contracted Environics Research Group to document best practices on transfer and student mobility in Alberta.[146] Six categories of best practice were identified:

Alberta Student Mobility - Sectors, 2008


3,604
Baccalaureate & Applied Studies, Comprehensive Community, Polytechnical, Specialized Arts & Culture, Independent Academic, First Nations Colleges, Private Providers, & Out of Province Institutions
2,351
4,885
Comprehensive Academic & Research Institutions
701

Note: Includes both part-time and full-time students.
Source: Alberta Council on Admissions and Transfer (ACAT) - 2008 Transfer Patterns Report

1. Strong leadership and administrative procedures.
2. Early planning for transfer.
3. Sending institutions that provide well-prepared and useful articulation requests.
4. High levels of trust and strong personal relationships.
5. Putting students' interests first.
6. Good maintenance of transfer agreements.

Working with post-secondary institutions, Council is moving forward on a number of recommendations emerging from the report, including:

- **Creating better linkages** between post-secondary institutions' and ACAT databases.
- **Reviewing terminology** and developing better clarity about the meaning, definition, and role of block transfer.
- Improving what and how transfer information is **communicated** to learners, particularly at the early application stage.
- Increasing the number and making better use of individuals within Alberta's advanced learning system with **expertise** in transfer and student mobility.

Credential Recognition

Alberta's International Qualifications Assessment Service (IQAS)[147] compares educational qualifications obtained in other countries to those in Alberta in order to assist individuals to obtain employment, acquire professional licensure, or pursue further education. While IQAS' services are predominantly used by immigrant Albertans, the services may be used by anyone with foreign educational qualifications – including Albertans who studied abroad. Foreign credential recognition can be the key to landing employment in one's field of study, obtaining employment commensurate with one's skills and level of education, and entering a post-secondary program without having to take prerequisite courses that duplicate previously acquired knowledge.

Biennially, IQAS undertakes a survey to measure client satisfaction and resulting educational and labour market outcomes from the credential assessment process. Survey data demonstrate that about 62% of IQAS clients seek an assessment primarily to pursue further education, 46% for employment, and 23% to obtain professional licensure.[148] For those IQAS clients served between July 2006 and June 2008, about 72% reported that the assessment helped them make a decision about their career and 79% reported that the assessment helped them make decisions about their educational upgrading. A total of 85% of respondents indicated that the assessment helped educational institutions understand their credentials, with 64% applying to an educational institution following their assessment. A total of 37% reported applying for further education because a Canadian credential was more useful in finding a job (37%) or because their current qualifications were not recognized in Canada (14%)[149] – two key challenges for immigrant Albertans.

Survey results demonstrate that IQAS clients who had jobs in their home country that required post-secondary education were less likely to find a job in Canada that also required post-secondary education: only 42% of foreign university-educated and 45% of foreign college-educated clients found similar employment in Canada. The top challenges cited by IQAS clients in either finding employment or pursuing further education were not having their work experience in their home country recognized (63%), not having the education received in their home country recognized (62%), financial barriers (57%), and being unable to meet professional licensing requirements (52%).[150]

Increased awareness of the supports available

to immigrant Albertans could enhance employment and educational outcomes and reduce the time in-province before seeking an IQAS assessment.

Prior Learning Assessment and Recognition

AET endorses a standard definition for Prior Learning Assessment and Recognition (PLAR), which states that PLAR involves assessing and recognizing a person's knowledge and skills acquired through non-formal and informal learning in relation to a certain goal. These goals may include receiving credit in a post-secondary program, meeting professional licensure/certification requirements, or obtaining employment. A PLAR assessment may include challenge exams, interviews, skill demonstrations, portfolio assessments, credential assessments, or placement tests.

While PLAR can be beneficial to all, it is particularly so for those who have not previously identified themselves as students, for those coming to Alberta from unknown or differing educational systems, or for those individuals moving between training providers or professions. A holistic understanding of an individual's learning enables educational providers and employers to more quickly and accurately place him in the program best suited to his needs and knowledge base, reducing both the time and opportunity costs associated with further learning.

In 2008, Advanced Education and Technology (AET) released *Advancing Prior Learning Assessment and Recognition (PLAR) in Alberta: an Action Plan.*[151] The Action Plan aims to increase capacity for PLAR in Alberta's advanced education system. A brief summary of implementation activities includes:

- An environmental scan was completed in 2009, providing a glimpse of the current state of PLAR in Alberta's post-secondary system.[152]
- A standard definition for PLAR has been endorsed by AET.
- A PLAR stakeholder committee has been established to support the implementation of the Action Plan.
- A new policy statement for reporting PLAR credits through the Learner and Enrolment Reporting System (LERS) has been approved. Beginning in 2010-11, institutions will be able to report PLAR credits along with regular enrolment credits through LERS.
- Professional development opportunities (workshops and courses) on PLAR-related topics are now available for Alberta target audiences.

As of late 2009, the majority of Alberta's public post-secondary institutions had PLAR assessments available for at least some courses and had established PLAR practices. Eleven institutions had an institutional PLAR policy in place, with an additional four institutions in the development stage.[153]

Post-Graduation Mobility

The Alberta Graduate Outcomes Survey[154] asks graduates of Alberta's post-secondary institutions where they were living when they had applied to post-secondary and whether they had permanently relocated to a different community since the time of their graduation. If graduates answered "yes", they were then asked to which location they relocated. Student locations were then combined to determine student residence after graduation.

According to the Alberta Graduate Outcomes Survey, Class of 2005-06, the majority of Alberta's post-secondary graduates (80.6%) chose to remain in Alberta following graduation. Out of 8,993 graduates responding to all three questions outlined above, a total of 16.2% of respondents indicated a place of residence elsewhere in

Canada, with a small percentage (3.2%) of graduates living outside the country.

Alberta's international students also indicate a preference to stay in Alberta after graduation, with about half of all students planning to remain in the province for work and/or further study.[155]

INTERNATIONAL OUTLOOK

International education involves both the provision of global education to Albertan students and the attraction of talented international students to the province. Alberta requires a highly educated workforce able to undertake research and apply global knowledge to foster innovation and success in the global economy. The development and attraction of top students, faculty, researchers, innovators and entrepreneurs is intrinsic to the province's prosperity and its ability to function in a diversely interconnected environment.

Albertans must be equipped with the linguistic, collaborative, and cross-cultural skills not only to take advantage of the opportunities before them – but to recognize them. They must have access to world-class teaching, research, and industry experiences, both within and outside of Alberta and Canada. Albertans must have the opportunity to witness and understand new and innovative approaches to the application of ideas and practices.

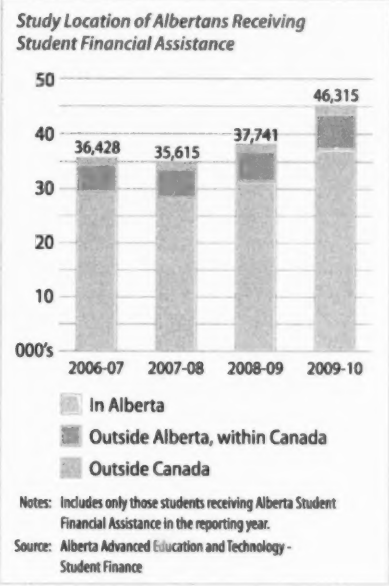
In late 2009, after detailed consultation with system stakeholders, AET put forward the *International Education Framework*.[156] The Framework identifies five broad outcomes and fourteen associated priority directions to guide planning and provide broad direction in support of government and institutions' international education activities. The specific outcomes for Campus Alberta's international education activities include:

- **A knowledge-driven future:** Alberta's international learners, researchers, and innovators contribute toward the advancement of the knowledge economy, support economic diversification and growth, support areas of strategic advantage, and play an integral role in support of the Alberta Innovates agenda.
- **Global strategic alliances:** Alberta's long-term economic and social priorities are achieved through strategic and collaborative alliances with other countries, businesses, and post-secondary providers.
- **Alberta is a well-recognized leader in learning, research, and innovation:** Alberta is well recognized internationally for learning, research, and innovation opportunities.
- **Sustainable opportunities:** The post-secondary and research and innovation systems have appropriate supports that enable sustainable opportunities for learners, faculty, innovators, and researchers.
- **Global awareness, leadership, and entrepreneurial capacity:** Alberta's learners, faculty, researchers, innovators, and entrepreneurs have competencies, skills, cultural awareness, and understanding to compete and succeed on a global stage. International exchanges contribute towards innovation excellence.

The strategic priorities outlined in the International Education Framework are aligned with the long-term priorities of the GOA, where appropriate. AET is also committed to work on a pan-Canadian international strategy through the Council of Ministers of Education Canada (CMEC).

Campus Alberta Internationalization

While there is currently no mechanism to track Albertans who choose to study outside the province, some indication of the number of Albertans leaving the province to study can be obtained from student financial assistance (SFA) data. Students must indicate the institution they will attend on their SFA application form. From these application forms, AET is able to track SFA recipients. The proportions of learners studying either in Alberta, outside the province, or abroad are used as a proxy for the proportion of Albertans who leave the province to study. In 2009-10, about 82% of Alberta SFA recipients remained in the province to study. About 15% studied elsewhere in Canada, and about 3% studied outside the country. This is consistent with the previous year.



As Albertans increasingly take advantage of opportunities to study outside the province, the ability to collect and track data on Albertans choosing to study outside the province is a data gap warranting further attention.

Immigrant Albertans

While Alberta's population has educational attainment levels on par with the Canadian average, there are indications of persistent levels of underemployment in the highest skilled occupational groups, indicating that the province may not be optimizing the knowledge, skills, or experience of the highly skilled immigrants that choose Alberta.

There has been a noticeable trend toward increasing skill levels among Canadian immigrants since 1990.[157] Unlike some other destinations, in Canada there is evidence that immigrants' educational disadvantages are not necessarily transferred to their children. Canada has among the lowest levels of intergenerational inequality transmission of all Organization for Economic Cooperation and Development (OECD) countries. As adults, children's earnings are not strongly tied to parental earnings, for either immigrants or Canadian-born individuals. In fact, the relationship between the two is weaker for Canadian immigrants.[158]

In 2006, 66.7% of immigrants to Alberta had completed some form of post-secondary education.[159] Over time, Canada's immigration policy has changed from a more general set of selection criteria to one that is more specific, favouring applicants with post-secondary education and technical skill sets, with increasing numbers of people immigrating to Canada under economic class category. Of people aged 25-64 years immigrating to Canada between 1996 and 2000, a total of 24% work in highly skilled occupations, compared to 13% of those who arrived between 1986 and 1990.[160]

Despite these qualifications, the national unemployment rate for recent immigrants in the prime working age group is more than double the rate of those born in Canada.[161]

International Students

In Alberta, international students comprise a significant proportion of the graduate student population – those students enrolled in Master's Degree and Doctoral Degree programs. Graduate students are the province's future professors and researchers. They are integral to fulfilling Alberta's innovation potential.

Although global competition for international students is growing, so is the demand for international educational experiences. Globally, it is estimated that demand for international education will grow from 1.9 million to 7.2 million students by 2025.[162]

International students make a significant contribution to the local economy while studying – tuition fees notwithstanding. International education services accounted for about 5.5% of all jobs in Canada's educational services sector in 2008 – a total of 64,940 jobs. The same year, international students in Canada collectively spent over $6.5 billion on tuition, accommodation, and discretionary spending, created over 83,000 jobs, and generated over $291 million in government revenue. Conservative estimates suggest that long-term students in the K-12 system collectively contribute an estimated $700 million per year to the Canadian economy, those in the university system over $3.2 billion, those in other post-secondary institutions $1.3 billion, and an additional $746 million per year comes from students pursuing short-term language courses.[163] The number of international students' family members and friends visiting Canada is estimated to be as high as 109,000 per year. This translates into over $285 million per year in tourism-related expenditures, about $161 million in GDP, a total of 5,330 jobs, and $8 million in government revenue. About 40% of surveyed international students in Alberta reported working while studying: 84% part-time and 63% on-campus.[164]

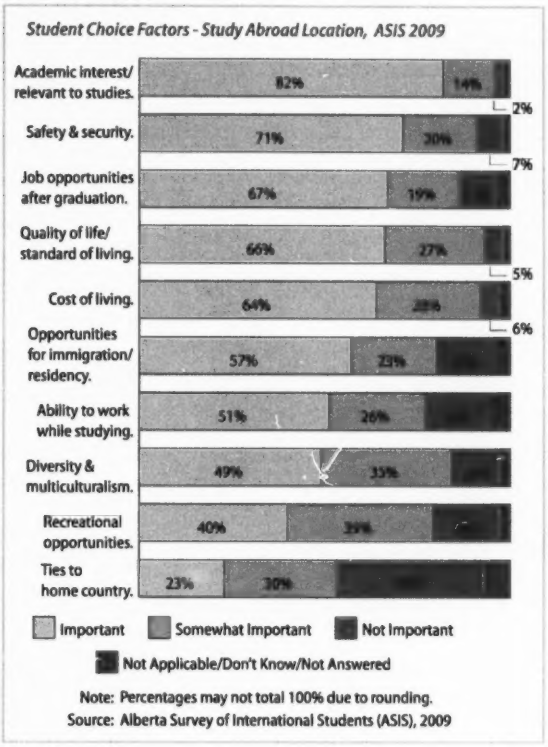
Typically, Ontario (37%), British Columbia (BC) (28%), and Quebec (16%) attract the majority of Canada's international students. Alberta attracted 8.1% of international students to Canada in 2008.[165] In order to gain better information on Alberta's attractiveness to international students, the first Alberta Survey of International Students (ASIS)[166] took place in 2009. The purpose of the survey was to gain insight on:

- **Student Experience** – what is the experience like for international students in Alberta?
- **Retention** – how is Alberta doing and what can be done better to retain international learners?
- **Attraction** – how do students find out about Alberta? What are they looking for, and how do they make decisions about where to study?
- **Alberta Perspective** – the only international student survey with the potential to capture all of Campus Alberta.

A total of 753 international students from 16 institutions participated in ASIS 2009, representing about 7.6% of all Alberta international students (based on 2008-09 data).

Overall, findings were consistent with those from the Canadian Bureau of International Education's pan-Canadian international student survey.[167] Students chose Alberta because of its established educational system, high quality institutions, and economic strength. Institutional websites were the primary way students sourced information about studying abroad, suggesting that awareness about available sources of information on studying in Alberta could be improved. There may be additional value in Alberta institutions working together more

closely to coordinate student recruitment and increase awareness of learning opportunities in the province as Campus Alberta.

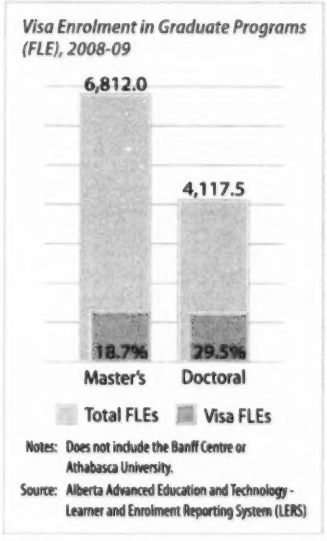


In terms of their Alberta experience, the majority of international students indicated that they would recommend Alberta to people from their home country as a place to study. The majority agreed that they had made friends with local students, felt comfortable in their classes, and felt welcome on campus. Most students felt that Alberta is a welcoming, safe, and comfortable place to live with many good personal and professional opportunities.

Many students expressed the hope that they will be able to find relevant employment and remain in the province. Half of all students surveyed indicated having plans to stay in Alberta following graduation. Of the 478 students planning to look for work after their studies, almost 60% planned to do so within Alberta.

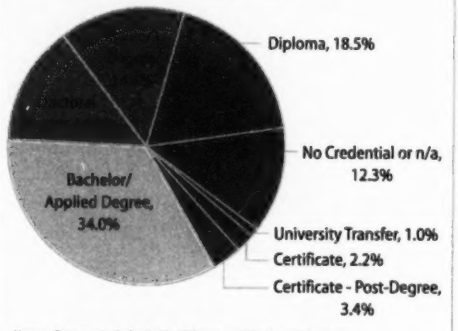
Overall, international students expressed the need to ensure that their study abroad experience is of good value, and provides a unique, rewarding, and quality overall experience. Increased attention, assistance, and support to students may enhance their Alberta experience and have a positive impact on the province's reputation on the world stage. Survey results highlight the importance of collaboration between governments and educational providers to ensure that students can access needed information and supports.

In 2008-09, international students made up 18.7% of all Master's Degree and 29.5% of all Doctoral students attending Alberta post-secondary institutions. Alberta is expected to continue to rely on international students for enrolment in graduate studies. A greater understanding of student choice factors will enable the province to build on its strengths and help ensure that Alberta's graduate programs continue to be programs of choice for international students.



The majority of Alberta's international students are enrolled in Bachelor/Applied Degree programs (34.0%), followed by Diploma (18.5%), and Master's Degree programs (14.7%). Compared to Alberta's non-international student population, international students are far more likely to be enrolled in programs at the graduate level, and twice as likely to choose programs in the Physical, Natural, and Applied Sciences program band (32.8% compared to 17.4%).

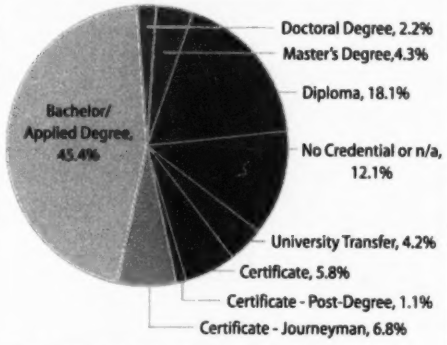
Visa Enrolment by Credential (FLE), 2008-09



Notes: Does not include the Banff Centre or Athabasca University. Apprenticeship and Diploma-Post Degree programs have <0.5% visa enrolment. Percentages may not total 100% due to rounding.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

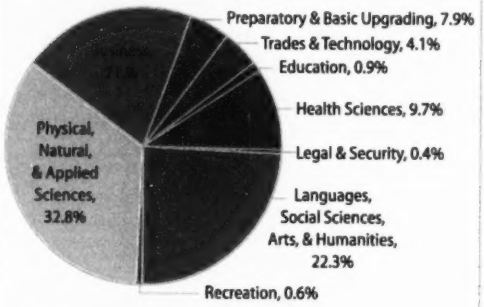
Non-Visa Enrolment by Credential (FLE), 2008-09



Notes: Does not include the Banff Centre or Athabasca University. Diploma-Post Degree programs have <0.5% visa enrolment. Percentages may not total 100% due to rounding.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

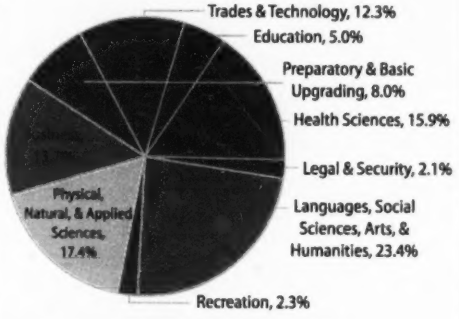
Visa Enrolment by Program Band (FLE), 2008-09


Preparatory & Basic Upgrading, 7.9%
Trades & Technology, 4.1%
Education, 0.9%
Health Sciences, 9.7%
Physical, Natural, & Applied Sciences, 32.8%
Legal & Security, 0.4%
Languages, Social Sciences, Arts, & Humanities, 22.3%
Recreation, 0.6%

Notes: Does not include the Banff Centre or Athabasca University. Percentages may not total 100% due to rounding. Some values above may not reconcile to future data queries due to ongoing work with Statistics Canada on CIP codes.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

Non-Visa Enrolment by Program Band (FLE), 2008-09


Trades & Technology, 12.3%
Education, 5.0%
Preparatory & Basic Upgrading, 8.0%
Health Sciences, 15.9%
Legal & Security, 2.1%
Physical, Natural, & Applied Sciences, 17.4%
Languages, Social Sciences, Arts, & Humanities, 23.4%
Recreation, 2.3%

Notes: Does not include the Banff Centre or Athabasca University. Percentages may not total 100% due to rounding. Some values above may not reconcile to future data queries due to ongoing work with Statistics Canada on CIP codes.

Source: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS)

Chapter Summary:

- The majority of Albertans do not directly transition to post-secondary education upon completing high school, and tend to delay post-secondary education.
- There is strong movement around the province as learners choose to take advantage of opportunities – educational and otherwise – outside their home region.
- While students are increasingly mobile, some are more mobile than others. There is a need to balance the alignment of capacity and demand for educational opportunities while ensuring that learners who are unable to relocate can access learning opportunities where they live – either in-person or through distance education.
- International students comprise a significant proportion of Alberta's graduate student population and bring a diversity of experience and knowledge from which Albertans can benefit. They make a substantial contribution to Alberta's social and economic well-being. Encouraging international students to study in Alberta and stay in the province upon graduation will support the province's research and innovation potential, and enhance Albertans' ability to take advantage of opportunities in a global, knowledge-driven economy.
- Immigrants to Alberta have high levels of educational attainment, but face severe barriers to labour market participation and prior learning recognition. The province cannot afford to have skilled people working below their abilities. While it is important to attract new people to the province, a simultaneous emphasis on those new Albertans already living here is required.

CHAPTER FIVE: DEMAND & CAPACITY

Aligning the demand for post-secondary opportunities with the advanced education system's capacity to deliver them is vital to maintaining affordable and accessible lifelong learning opportunities for Albertans. Flexibility is required in order to meet the changing needs of today with prospective highs or lows in demand that typically occur unequally across institutions, regions, and programs. Understanding application and enrolment trends, combined with a realistic picture of what the system can accomplish within given resource constraints, will enhance Campus Alberta's responsiveness to the needs of learners, taxpayers, and the economy.

APPLYING TO POST-SECONDARY EDUCATION

Data on applicants and applications is a snapshot in time, based on applicants for the fall session of an academic year. Using postal codes on post-secondary application forms, AET is able to track where students apply from and where they attend post-secondary education. This provides both an indication of demand, but also a snapshot of student mobility. While it is possible that some students move to the region of anticipated post-secondary attendance and then apply for post-secondary education, postal code data provides a good indication of student flows among regions, particularly when combined with other data, such as those based on the ASN.

Data demonstrate that the majority of Albertans applying to a publicly funded post-secondary institution in Alberta apply to post-secondary institutions in the region they are from (based on their postal code at the time of application). This is the case for every service region except the Lakeland Region, where the largest proportion of applicants applies to institutions in the Edmonton Region (52.9%).

From outside the province, the Calgary Region attracts the largest proportion of Canadian applicants (51.3%), followed by the Edmonton (38.4%) and Lethbridge (5.9%) Regions.

While this may, in part, be due to some institutions in the Calgary Region reporting Alberta postal codes as "unknown Canadian" postal codes, these figures are consistent with the increasing trends of choosing a university education over other forms of post-secondary learning, and with the general trend towards urbanization. Internationally, applicants are even more attracted to the major urban centres and to institutions in the Comprehensive Academic and Research sector, with a total of 66.4% of applicants applying from outside Canada applying to the Edmonton Region and almost a third (29.8%) to the Calgary Region.

Conducted for the first time in 2008, the Alberta Survey of Qualified Applicants surveyed Albertans who were qualified and offered admission at one of Alberta's publicly-funded post-secondary institutions, but who chose not to attend.[168] The main reason survey respondents cited for choosing not to attend post-secondary education was to take advantage of labour market opportunities (22.3%). Other top reasons included financial barriers (18.6%), a change of mind (17.1%), and personal/health issues (6.5%). A total of 5.1% of survey respondents indicated deciding to attend a post-secondary institution outside Alberta.

Student Applicant Trends - Alberta, Fall 2009

WHERE STUDENTS APPLY FROM	WHERE STUDENTS APPLY TO												
Fall 2009	Calgary Region	Central Region	Edmonton Region	Grande Prairie Region	Keyano Region	Lakeland Region	Lethbridge Region	Medicine Hat Region	Northern Lakes Region	Portage Region	All Regions (w/out AU)	Athabasca University (AU)	Total (with AU)
Calgary Region	34,500 (89.9%)	699 (1.8%)	3,603 (9.4%)	34 (0.1%)	26 (0.1%)	60 (0.2%)	2,215 (5.8%)	130 (0.3%)	7 (0.0%)	26 (0.1%)	38,391 (100%)	2,482 (6.1%)	40,438 (100%)
Central Region	1,346 (19.4%)	4,000 (57.7%)	1,749 (25.2%)	38 (0.5%)	17 (0.2%)	116 (1.7%)	333 (4.8%)	88 (1.3%)	–	22 (0.3%)	6,936 (100%)	441 (6.0%)	7,293 (100%)
Edmonton Region	1,812 (4.8%)	765 (2.0%)	35,373 (93.3%)	203 (0.5%)	55 (0.1%)	302 (0.8%)	611 (1.6%)	52 (0.1%)	56 (0.1%)	190 (0.5%)	37,908 (100%)	2,083 (5.2%)	39,698 (100%)
Grande Prairie Region	191 (7.3%)	84 (3.2%)	715 (27.3%)	1,609 (61.5%)	6 (0.2%)	33 (1.3%)	71 (2.7%)	7 (0.3%)	142 (5.4%)	10 (0.4%)	2,618 (100%)	195 (7.1%)	2,764 (100%)
Keyano Region	180 (11.9%)	33 (2.2%)	565 (37.4%)	11 (0.7%)	735 (48.7%)	33 (2.2%)	53 (3.5%)	6 (0.4%)	–	66 (4.4%)	1,510 (100%)	163 (9.8%)	1,661 (100%)
Lakeland Region	118 (9.1%)	146 (11.3%)	685 (52.9%)	6 (0.5%)	–	392 (30.3%)	55 (4.2%)	16 (1.2%)	–	59 (4.6%)	1,295 (100%)	101 (7.3%)	1,382 (100%)
Lethbridge Region	552 (12.0%)	100 (2.2%)	564 (12.3%)	–	–	22 (0.5%)	3,572 (77.7%)	74 (1.6%)	–	8 (0.2%)	4,598 (100%)	249 (5.2%)	4,817 (100%)
Medicine Hat Region	486 (18.7%)	84 (3.2%)	352 (13.5%)	8 (0.3%)	–	18 (0.7%)	332 (12.8%)	1,601 (61.6%)	–	7 (0.3%)	2,600 (100%)	190 (6.9%)	2,735 (100%)
Northern Lakes Region	109 (4.5%)	113 (4.6%)	708 (28.9%)	294 (12.0%)	7 (0.3%)	37 (1.5%)	46 (1.9%)	10 (0.4%)	1,221 (49.9%)	143 (5.8%)	2,449 (100%)	123 (4.8%)	2,562 (100%)
Portage Region	91 (3.9%)	85 (3.6%)	834 (35.7%)	11 (0.5%)	19 (0.8%)	159 (6.8%)	30 (1.3%)	12 (0.5%)	9 (0.4%)	1,256 (53.8%)	2,335 (100%)	125 (5.1%)	2,441 (100%)
Alberta Unknown	87 (19.0%)	37 (8.1%)	251 (54.8%)	9 (2.0%)	10 (2.2%)	19 (4.1%)	22 (4.8%)	21 (4.6%)	–	8 (1.7%)	458 (100%)	24 (5.0%)	482 (100%)
Alberta	39,417 (39.2%)	6,142 (6.1%)	45,244 (45.0%)	2,225 (2.2%)	879 (0.9%)	1,191 (1.2%)	7,316 (7.3%)	2,017 (2.0%)	1,444 (1.4%)	1,794 (1.8%)	100,485 (100%)	6,176 (5.8%)	105,607 (100%)

Notes: Applicants' home region is based on the postal code derived from their post-secondary application forms. Institutions are grouped into service regions based on the location of the institution's main campus location. Values less than five have been suppressed and are indicated by (--).
Summing up the rows will not equal the totals listed, as students may have applied to more than one institution. Values in the tables represent the number of unique applicants at the level the table indicates. Students may apply to more than one institution/region; as such, these students will be counted in each column (row) that they appear in; however, they will only be counted ONCE in the Summary columns (rows). Table does not include the Banff Centre.
Prior to 2008, Athabasca University (AU) reported applicants to all courses, regardless of previous attendance. For 2008 onwards, AU will report new applicants or those applying to a new program. In 2008, NorQuest College updated their process to include applications/applicants for programs that were excluded in previous years.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)

Student Applicant Trends - Canada and International, Fall 2009

WHERE STUDENTS APPLY FROM	WHERE STUDENTS APPLY TO												
Fall 2009	Calgary Region	Central Region	Edmonton Region	Grande Prairie Region	Keyano Region	Lakeland Region	Lethbridge Region	Medicine Hat Region	Northern Lakes Region	Portage Region	All Regions (w/out AU)	Athabasca University (AU)	Total (with AU)
Alberta	39,417 (39.2%)	6,142 (6.1%)	45,244 (45.0%)	2,225 (2.2%)	879 (0.9%)	1,191 (1.2%)	7,316 (7.3%)	2,017 (2.0%)	1,444 (1.4%)	1,794 (1.8%)	100,485 (100%)	6,176 (5.8%)	105,607 (100%)
British Columbia	2,917 (45.7%)	273 (4.3%)	3,033 (47.5%)	211 (3.3%)	28 (0.4%)	55 (0.9%)	442 (6.9%)	31 (0.5%)	5 (0.1%)	44 (0.7%)	6,380 (100%)	1,398 (18.0%)	7,747 (100%)
Manitoba	322 (34.9%)	48 (5.2%)	423 (45.8%)	6 (0.7%)	–	69 (7.5%)	87 (9.4%)	22 (2.4%)	–	–	923 (100%)	470 (33.9%)	1,385 (100%)
New Brunswick	89 (37.7%)	13 (5.5%)	132 (55.9%)	–	–	5 (2.1%)	8 (3.4%)	–	–	–	236 (100%)	260 (52.5%)	495 (100%)
Newfoundland and Labrador	79 (36.7%)	–	124 (57.7%)	–	–	–	–	–	–	–	215 (100%)	165 (43.8%)	377 (100%)
Northwest Territories	159 (21.0%)	49 (6.5%)	387 (51.2%)	162 (21.4%)	–	10 (1.3%)	71 (9.4%)	5 (0.7%)	6 (0.8%)	19 (2.5%)	756 (100%)	132 (15.0%)	882 (100%)
Nova Scotia	213 (43.6%)	20 (4.1%)	249 (51.0%)	–	6 (1.2%)	–	25 (5.1%)	–	–	–	488 (100%)	539 (52.7%)	1,022 (100%)
Nunavut and Yukon Territories	89 (39.6%)	14 (6.2%)	97 (43.1%)	8 (3.6%)	–	–	38 (16.9%)	–	–	–	225 (100%)	52 (18.9%)	275 (100%)
Ontario	2,226 (49.3%)	155 (3.4%)	2,209 (48.9%)	31 (0.7%)	27 (0.6%)	72 (1.6%)	186 (4.1%)	30 (0.7%)	–	–	4,513 (100%)	6,006 (57.3%)	10,489 (100%)
Prince Edward Island	37 (34.6%)	–	60 (56.1%)	–	–	–	6 (5.6%)	–	–	–	107 (100%)	66 (38.4%)	172 (100%)
Quebec	211 (50.4%)	14 (3.3%)	202 (48.2%)	–	–	–	12 (2.9%)	–	–	–	419 (100%)	273 (39.5%)	692 (100%)
Saskatchewan	717 (21.9%)	220 (6.7%)	1,099 (33.6%)	13 (0.4%)	19 (0.6%)	547 (16.7%)	460 (14.1%)	396 (12.1%)	–	104 (3.2%)	3,272 (100%)	839 (20.6%)	4,082 (100%)
Canada (excluding Alberta)	11,847 (51.3%)	822 (3.6%)	8,854 (38.4%)	474 (2.1%)	139 (0.6%)	766 (3.3%)	1,369 (5.9%)	500 (2.2%)	28 (0.1%)	192 (0.8%)	[illegible]	10,319 (31.0%)	[illegible]
Outside Canada	3,637 (29.8%)	122 (1.0%)	8,093 (66.4%)	62 (0.5%)	14 (0.1%)	15 (0.1%)	769 (6.3%)	112 (0.9%)	11 (0.1%)	–	12,188 (100%)	410 (3.3%)	12,597 (100%)
Other/ Unknown/ Not Reported	9,155 (47.3%)	178 (0.9%)	9,508 (49.1%)	110 (0.6%)	60 (0.3%)	15 (0.1%)	899 (4.6%)	151 (0.8%)	26 (0.1%)	18 (0.1%)	19,375 (100%)	529 (2.7%)	19,903 (100%)
ALL SERVICE AREAS	54,164 (40.4%)	7,109 (5.3%)	62,070 (46.3%)	2,769 (2.1%)	1,032 (0.8%)	1,972 (1.5%)	9,475 (7.1%)	2,648 (2.0%)	1,485 (1.1%)	1,989 (1.5%)	133,938 (100%)	16,905 (11.3%)	149,537 (100%)

Notes: Applicants' home region is based on the postal code derived from their post-secondary application forms. Institutions are grouped into service regions based on their main campus location. Summing up the rows will not equal the totals listed, as students may have applied to more than one institution. Values in the tables represent the number of unique applicants at the level the table indicates. Students may apply to more than one institution/region; as such, these students will be counted in each column (row) that they appear in; however, they will only be counted ONCE in the Summary columns (rows). Table does not include the Banff Centre. Values less than 5 have been suppressed and are indicated by (–).

Prior to 2008, Athabasca University (AU) reported applicants to all courses, regardless of previous attendance. For 2008 onwards, AU will report new applicants or those applying to a new program. In 2008, NorQuest College updated their process to include applications/applicants for programs that were excluded in previous years.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)

TURN-AWAYS

Like applicant data, turn-away data is a snapshot in time, based on applicants for the fall session of an academic year. The turn-away measure aims to provide a picture of what programs, institutions, and regions of the province have great demand – so much that they are not able to accommodate qualified applicants. The aim is to foster increased alignment of demand and capacity within Alberta's advanced learning system.

A system turn-away is an applicant that:

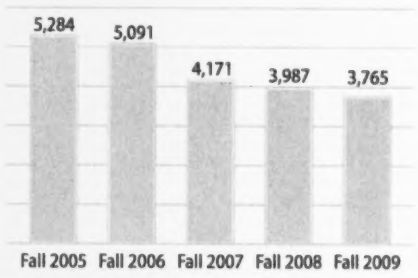
- met the minimum qualification requirements in at least one of his applications;
- was not offered admission to any program to which he applied; and,
- did not attend a publicly-funded post-secondary institution anywhere in Alberta that academic year.

The definition of *qualified* is based solely on meeting the minimum academic requirements as outlined in institutions' course calendars, and does not consider such things as portfolio assessments or competitive Grade Point Average (GPA) requirements. Individually, institutions set criteria for what constitutes a qualified applicant for their program offerings. For example, a student who was qualified but did not gain acceptance at one institution, but subsequently was offered admission to or attended another institution, would not be considered a system turn-away because Alberta's publicly-funded advanced education system was able to accommodate him.

Turn-away figures may be somewhat overstated, as they include qualified Albertans that were not offered admission at a publicly-funded post-secondary institution in the province, but may have attended either a private institution in Alberta or a post-secondary institution outside the province. Currently, AET is unable to track all students that attend post-secondary education outside Alberta.

The number of system turn-aways is decreasing. From fall 2005 to fall 2009, the number of system turn-aways decreased by over one-quarter (28.7%).

Albertan System Turn-Aways



Notes: Fall 2007 was the first year that applications for Fall apprenticeship programs were reported in ASI.
In 2008, Athabasca University began reporting only applicants who were not students in the previous year or those that applied for program transfer.
Applicants were assigned Albertan status based on their postal code at their time of application.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)

Typically, for greater clarity of reporting, turn-aways have only been reported at the system-level. Data at the program band, institution, and service region levels are now provided to offer some indication of demand at those levels. Turn-away figures will differ depending on whether they are reported at the program band, institutional, regional, or system levels.

A regional turn-away is an applicant that:

- met the minimum qualification requirements in at least one of her applications to a program in that region;
- was not offered admission to any program to which she applied in that region; and,
- did not attend a publicly-funded post-secondary institution anywhere in that region in that academic year.

For example, one can examine the case of a student who applies to a program at an institution in the Lakeland Region and to a program at an institution in the Portage Region. The student is qualified for both programs, but was only offered admission to the program in the Lakeland Region. The student is counted as a turn-away from the Portage Region; however, she is not counted as a turn-away at the system level because Alberta's publicly-funded advanced education system was able to accommodate her.

Of all service regions, the Calgary Region has consistently had the greatest number of Albertan turn-aways, at 2,021 in fall 2009. This is a decrease of 55.3% over the fall 2005 to fall 2009 period. The Edmonton Region had the second highest number of Albertan turn-aways in fall 2009, at 1,653 Albertans.

A snapshot of turn-away data is also available at the program, or field of study, level. As in the previous five years, the Health Sciences had the highest number of Albertan turn-aways in fall 2009 (1,149). This was followed by Trades and Technology (810) and Preparatory and Basic Upgrading (806). Health and Trades fields have demonstrated strong labour market demand over the recent period, increasing student demand for these programs. Ongoing construction activities – limiting space in the short-term – and an increasing need for education as a precursor to labour market success have impacted turn-aways in Preparatory and Basic upgrading programs over the past few years.

Specific programs across Campus Alberta with the greatest demand in excess of available student spaces include those in Health Professions and Related Clinical Services, High School/Secondary Diploma and Certificate Programs, and Business, Management, Marketing and Related Support Services.

Albertan Turn-Aways by Service Region

Geographic Service Region	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Calgary Region	4,518	4,350	2,816	2,100	2,021
Edmonton Region	777	771	1,338	1,834	1,653
Central Region	278	199	152	144	84
Keyano Region	–	–	–	22	56
Lethbridge Region	86	32	28	19	43
Grande Prairie Region	–	–	–	–	29
Medicine Hat Region	8	–	7	–	14
Northern Lakes Region	–	61	26	11	16
Lakeland Region	–	6	21	–	–
Portage Region	15	15	36	10	–
Athabasca University	–	–	–	–	–
Alberta	5,284	5,091	4,171	3,987	3,765

Notes: Values less than five have been suppressed and are indicated by (–). Does not include the Banff Centre.
Summing the rows will not equal the provincial total, as students may have been turned-away from one region and offered admission in another.
Fall 2007 was the first year applications for Fall apprenticeship programs were reported in ASI.
Applicants were assigned Albertan status based on their postal code at thetime of application.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)

Top Ten Fields of Study for Albertan Turn-Aways, Fall 2009

CIP Code/Description	Albertan Turn-Aways	All Turn-Aways
Health Professions & Related Clinical Services	1,128	2,082
High School/Secondary Diploma & Certificate Programs	553	560
Business, Management, Marketing & Related Support Services	367	507
Engineering Technologies/Technicians	344	500
Mechanic & Repair Technologies/Technicians	307	450
Basic Skills	262	271
Communications Technologies/Technicians	195	279
Legal Professions & Studies	190	488
Visual & Performing Arts	163	281
Personal & Culinary Services	115	193

Notes: * A significant jump in program band turn-aways in the Preparatory and Basic Upgrading category may be largely attributed to a loss of classroom space due to ongoing construction at Bow Valley College, from 2007 onwards.
Programs are listed by two-digit CIP code.
Applicants were categorized as Albertan based on their postal code at their time of application.
Table does not include data from the Banff Centre.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)

While these qualified individuals are considered to be turn-aways at these individual program levels, many may still be attending in other programs within Alberta's advanced education system.

Turn-away figures at a program level may be indicative of demand and capacity at that level; however, they are not necessarily good indicators of overall system access.

Albertan Turn-Aways by Program Band (Applying to)

Program Band	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009	5-Year Change
Business	809	680	559	534	367	-54.6%
Education	234	264	172	69	94	-59.8%
Health Sciences	1,550	1,457	1,316	1,162	1,149	-25.9%
Languages, Social Sciences, Arts, & Humanities	1,507	1,166	578	500	400	-73.5%
Legal & Security	356	369	276	195	195	-45.2%
Physical, Natural, & Applied Sciences	846	837	524	493	412	-51.3%
Preparatory & Basic Upgrading*	26	88	362	492	806	3,000.0%
Recreation	91	89	43	53	66	-27.5%
Trades & Technology	889	978	1,002	1,079	810	-8.9%
All Program Bands	5,284	5,091	4,171	3,987	3,765	-28.7%

Notes: * A significant jump in program band turn-aways in the Preparatory and Basic Upgrading category may be largely attributed to a loss of classroom space due to ongoing construction at Bow Valley College, from 2007 onwards.
Applicants were categorized as Albertan based on their place of residence (postal code) at their time of application.
Table does not include data from the Banff Centre.
Fall 2007 was the first year that applications for FALL apprenticeship programs were reported in ASI.
In 2008, Athabasca University began reporting only those applicants who were not students in the previous year or those than applied for program transfer.
Some values above may not reconcile to future data queries or previously stated values due to ongoing work with Statistics Canada on CIP codes.
Summing the rows will not equal the provincial total, as students may have been turned-away from one program band and offered admission in another.

Source: Alberta Advanced Education and Technology - Applicant Submission Initiative (ASI)

ENROLMENT PROJECTIONS

In alignment with Alberta Education, Alberta Finance and Enterprise, and Alberta Health and Wellness, AET began work on creating an enrolment forecasting model in 2008. The result is the AET Enrolment Forecasting Model – also known as *In-jector*.[169] *In-jector's* primary function is to serve as a springboard for thoughtful, strategic conversations about future enrolment growth and decline at post-secondary institutions based on data and sound forecasting methodology. It provides planners with a platform for considering future student populations and their potential impact on budgets, staffing, programs, and facilities. *In-jector* can also be used to create scenarios based on assumptions about the underlying drivers of enrolment in institutions and programs.

In-jector uses historical data patterns to determine input variables for calculating future enrolment. When all of these variables are entered, it is possible to create potential projection scenarios. Three sets of variables are used:

- **Uptake Levels**: used to determine the number of new enrolments at an institution each year, uptake levels are based on the number of entrants to an institution from the K-12 system over the course of 10 years (assuming all the institution's enrolments came from the institutions' underlying service area – for CARIs, this is Alberta; for all other institutions, it is their service region).

- **Retention Levels**: the percentage of the previous academic years' FLEs that remain in the current academic year.
- **Program Proportions**: the percentage of institutions' gender-based enrolments in each program band.

In-jector uses cohorts of high school 17-year olds aged according to the year being forecasted to predict new enrolments (FLE). It uses the previous year's enrolments and applies age specific retention rates to predict retained FLEs. The total FLEs are then broken into program bands using institution-specific proportions.

Projected Enrolment Growth (FLE) by Service Region, Ten-Year Forecast

Geographic Service Region	Projected Peak Enrolment 2009-19	% of Total
Calgary Region	6,320	43.8%
Edmonton Region	4,780	33.1%
Grande Prairie Region*	785	5.4%
Lethbridge Region	770	5.3%
Central Region	365	2.5%
Northern Lakes Region	155	1.1%
Keyano Region	115	0.8%
Medicine Hat Region	115	0.8%
Lakeland Region	45	0.3%
Portage Region	45	0.3%
Athabasca University	950	6.6%
TOTAL	14,445	100%

Note: *Much of this growth is attributable to the recent assumption of programs from Fairview College, which created a sharp one-time enrolment increase.
All figures are in FLEs. Does not include the Banff Centre.
Peak enrolment is the maximum expected enrolment growth over the period. The peak figure does not take into account enrolment decreases; annual enrolment increases are summed to derive a peak increase.
Source: Advanced Education and Technology - Enrolment Forecasting Model

The size of each single-year 17-year-old cohort is an output of Alberta Education's Student Population Projection and Teacher Forecasting Model. Alberta Education's model predicts student counts using detailed population data from Alberta Health and Wellness, as well as several other sources. Historic enrolment data (including new enrolments, retention, and program proportions) is derived from information submitted by publicly-funded post-secondary institutions to AET's Learner and Enrolment Reporting System (LERS).

While formula-driven, the model is able to take into account data anomalies, such as sudden drops or increases in enrolment.
The table below outlines enrolment projections by service region, based on roll-ups of institution-level figures. Enrolment growth is expected to vary among institutions and, in most cases, is not expected to follow a linear growth path. The majority of institutions will see enrolment increases in some years and decreases in others, reaching their peak enrolment before the end of the projection period in 2018-19. The projected enrolment range represents the lowest and highest levels of enrolment within the region over the projection period, and do not necessarily equate to 2008-09 and 2018-19 enrolment levels.

Over the 2008-09 to 2018-19 projection period, enrolment growth is expected to vary across the system to a total peak enrolment increase of 14,445 FLEs. Projected peak enrolment growth is the sum of all enrolment increases over the forecast period. Regionally, the highest peak growth is anticipated in the Calgary Region, followed by the Edmonton Region.

SYSTEM CAPACITY

Assessing institutional capacity is critical to identifying space pressures resulting from projected enrolment growth in the post-secondary system. AET works with post-secondary institutions to ensure that program and capital expansions are aligned with the context provided in the CAPF, and that they meet the needs of learners, the labour market, and society.

Assessing projected system capacity has two elements: (1) determining existing institutional capacity and (2) calculating the capacity that will result from approved or underway capital projects that are not yet completed.

Estimates of institutional capacity are based on enrolment data, which indicate the level of enrolment an institution has historically been able to accommodate, including collaborative and Learner-Funded Designated Only (LFDO) programs.[170]

The estimate of the increase in student access that can be accommodated by approved or underway capital projects is based on information from institutions' capital project descriptions. Institutions submit business cases and project descriptions through Alberta Infrastructure's Building and Land Information Management System (BLIMS). The estimated increase in capacity is updated by the institution as its project develops. The estimated capacity increase resulting from institutions' approved capital project(s) is one of the factors in assessing the need for the project, prioritizing it in the capital planning process, and gaining approval through the provincial capital plan.

Over the ten-year forecast period, Campus Alberta is well-positioned to meet anticipated demand for post-secondary education at the system level. As the table below demonstrates, over the 2008-09 to 2018-19 forecast period, a capacity surplus of about 6,850 FLEs is anticipated at the system level. Capacity levels vary across regions and institutions, however, with some institutions in the high-demand regions of Edmonton and Calgary posting a shortage of capacity to meet projected demand.

There has been significant progress made toward increasing capacity throughout the post-secondary system. Recently completed expansions and the approved capital projects underway will help accommodate enrolment increases in response to both learner and labour market demand. Capacity expansions also address facilities that have been over-utilized in recent periods due to high demand in specific program areas, such as technical trades training and nursing.

New capital projects, however, are not the only way to increase access. In 2009-10, post-secondary institutions responded to increased student demand and higher levels of enrolment by maximizing the use of existing buildings. Strategies included implementing a trimester program delivery model, increasing the number of scheduled teaching and learning hours per week, maximizing classroom seats, and accommodating faculty and staff in shared space or open concept work areas.

Capacity and Forecasted Enrolment by Institution & Service Region

Institution	2008-09 Existing Capacity	Approved Expansion/ Under Construction	2018-19 Projected Capacity	Projected Enrolment Range 2008-09 to 2018-19*		Surplus/ (Shortage) to meet High
				Low	High	
Alberta College of Art & Design	960	–	960	985	1,059	(99)
Ambrose University College	1,000	–	1,000	303	455	545
Banff Centre	550	–	550	n/a	n/a	n/a
Bow Valley College	4,500	3,500	8,000	3,825	4,920	3,080
Mount Royal University	9,500	600	10,100	8,956	10,552	(452)
Southern Alberta Institute of Technology	11,000	3,600	14,600	11,818	12,950	1,650
St. Mary's University College	500	–	500	337	439	61
University of Calgary	23,150	2,185	25,335	24,384	26,535	(1,200)
TOTAL Calgary Region	51,160	9,885	61,045	50,609	56,910	4,135
Canadian University College	500	–	500	285	339	161
Olds College	1,545	–	1,545	1,271	1,389	156
Red Deer College	4,500	–	4,500	3,730	3,918	582
TOTAL Central Region	6,545	–	6,545	5,286	5,646	899
Concordia University College	1,800	–	1,800	1,298	1,341	459
Grant MacEwan University	12,100	–	12,100	10,221	11,127	973
King's University College	880	–	880	504	571	309
Northern Alberta Institute of Technology	12,050	225	12,275	13,583	14,380	(2,105)
NorQuest College	4,400	–	4,400	5,084	5,806	(1,406)
University of Alberta	32,900	4,030	36,930	32,844	34,966	1,964
TOTAL Edmonton Region	64,130	4,225	68,385	63,534	68,191	194
Grande Prairie Regional College	2,550	50	2,600	1,290	2,073	527
TOTAL Grande Prairie Region	2,550	50	2,600	1,290	2,073	527
Keyano College	1,560	108	1,668	1,212	1,325	343
TOTAL Keyano Region	1,560	108	1,668	1,212	1,325	343
Lakeland College	2,075	150	2,225	1,894	2,092	133
TOTAL Lakeland Region	2,075	150	2,225	1,894	2,092	133
Lethbridge College	4,000	–	4,000	3,747	3,925	75
University of Lethbridge	6,920	450	7,370	6,689	7,346	24
TOTAL Lethbridge Region	10,920	450	11,370	10,436	11,271	99
Medicine Hat College	2,400	250	2,650	2,313	2,423	227
TOTAL Medicine Hat Region	2,400	250	2,650	2,313	2,423	227
Northern Lakes College	1,200	–	1,200	1,020	1,172	28
TOTAL Northern Lakes Region	1,200	–	1,200	1,020	1,172	28
Portage College	1,260	–	1,260	934	1,024	236
TOTAL Portage Region	1,260	–	1,260	934	1,024	236
Athabasca University	7,000	1,500	8,500	7,526	8,475	25
SYSTEM TOTAL	150,800	16,648	167,448	146,054	160,602	6,846

Notes: All figures are in FLEs. Forecast data are not available for the Banff Centre. Projected capacity includes existing capacity, recently completed facilities, and approved projects underway.
*Projected low and high enrolment figures do not necessarily equate to projected enrolment figures in the 2008-09 and 2018-19 academic years, but at some point over the 2008-09 to 2018-19 period.

Sources: Alberta Advanced Education and Technology - Learner and Enrolment Reporting System (LERS), Post-secondary Planning and Investments Branch, Enrolment Forecasting Model

In order to assist institutions in maximizing the use of existing buildings, AET undertook a Post-secondary Space Utilization Study beginning in January 2010. The goal of the study is to assess the data, tools, and resources institutions use to identify their space needs, including increases in space and changes to existing spatial arrangements. While the study is intended neither to validate the need for additional space nor directly influence the capital planning process, it may suggest alternative approaches to estimating system capacity to better determine current space pressures and future needs. A final report is anticipated in July 2010 and will be available to post-secondary institutions on the Campus Alberta Planning System. Study findings will contribute to the development of a consistent space utilization reporting process able to consider each institution's unique context, which will contribute to a more accurate understanding of institutional capacity.

Chapter Summary:

- The number of Albertan turn-aways has decreased over the past five years, with progress made on aligning demand and capacity throughout the province.
- Alberta's advanced education system can expect peak enrolment growth of approximately 14,445 FLEs over the 2009-19 forecast period. Varying levels of enrolment growth are expected across programs, institutions, and regions.
- Based on estimates of existing and projected capacity, Campus Alberta is well-positioned to meet anticipated learner demand at the system level over the projection period.
- Across the system, demand and capacity pressures are unequal; continued effort to align demand and capacity and the regional and institutional levels is required.

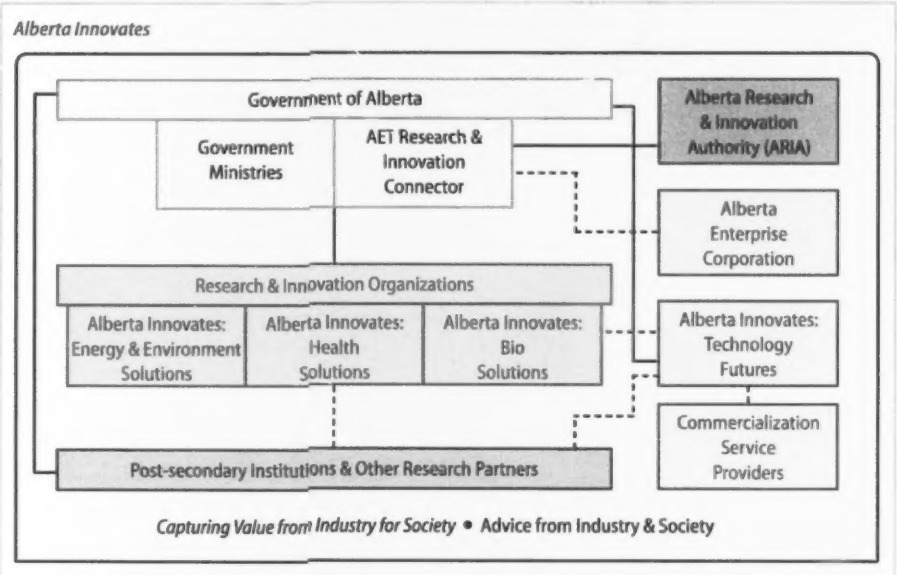
CHAPTER SIX: RESEARCH

Alberta's provincially funded research and innovation (R&I) system is guided by provincial government priorities as established in ministerial mandate letters and approved business plans. On behalf of the GOA, AET has overall responsibility for the oversight and effective coordination of the provincially funded research and innovation system, including:

- **System performance and reporting:** The measures and indicators needed to review the use of resources, the success of the system in stimulating industry growth, and facilitating diversification of the economy.
- **Developing and implementing strategies:** Supporting knowledge-based industry growth where Alberta has jurisdictional advantage, industry attraction, and investment attraction.
- **Representing the GOA:** At inter-provincial, federal, and international meetings, having responsibility for all international agreements relating to research and innovation.
- **Funding:** Identifying requirements and working with other organizations to review and coordinate funding for knowledge-based industry development.

With stakeholder support, AET has a lead role in funding and coordinating sustainable base research capacity building, including basic research, applied research, and platform technologies. Where appropriate, AET also supports external organizations that undertake or promote basic research.

Other ministries are working with AET and its entities to determine their research and innovation needs. While ministries have responsibility for development of the value-added sectors associated with their mandates, there is recognition that AET can play an assistive role in designing, managing, and delivering their research and innovation priorities.


Alberta Innovates
Government of Alberta
Government Ministries
AET Research & Innovation Connector
Alberta Research & Innovation Authority (ARIA)
Alberta Enterprise Corporation
Research & Innovation Organizations
Alberta Innovates: Energy & Environment Solutions
Alberta Innovates: Health Solutions
Alberta Innovates: Bio Solutions
Alberta Innovates: Technology Futures
Commercialization Service Providers
Post-secondary Institutions & Other Research Partners
Capturing Value from Industry for Society • Advice from Industry & Society

The role of post-secondary institutions within Alberta's R&I system includes the creation and dissemination of knowledge, the attraction, retention, and supply of Highly Qualified and Skilled Personnel (HQSP), and the communication of institutional research and innovation priorities to AET via annual IRPs.

Alberta Innovates

In discussions of the *Roles and Mandates Framework for Alberta's Provincially Funded Research and Innovation System*[171], stakeholders indicated the need for better alignment and coordination of provincially funded research and innovation resources in order for the province to become more competitive and achieve desired outcomes. A stronger leadership role for government was sought in overseeing and focusing the R&I system on provincial priorities in order to produce value-added opportunities and develop knowledge-based industries that could support the diversification of Alberta's economy and help sustain long-term prosperity.

On January 1st, 2010 the *Alberta Research and Innovation Act* established the legislative framework for Alberta's R&I system and enabled the necessary strategy and structural changes to:

- Reduce complexity and increase connectedness.
- Improve transparency and accessibility.
- Reduce duplication and overlap.
- Establish and sustain primary areas of focused investment.
- Increase local commercialization and product development.
- Increase Alberta's competitiveness in the global economy.

Through Alberta Innovates, AET provides strategic leadership for the development of a knowledge-driven economy and supports a dynamic and integrated innovation system. The role of government is to develop collaborative relationships, facilitate communication, and ensure system alignment. Government also has a role in developing business cases for investment, promoting increased funding, providing concierge and connector services between organizations and across the system.

Alberta's post-secondary institutions have a significant role to play in the success and sustainability of Alberta Innovates. Institutions are partners in research capacity planning and in establishing a collaborative process that supports and enhances both the advanced learning and R&I systems. Institutional research activity underlies base research capacity and, as such, institutions are key players in integrating the access planning and research capacity planning processes.

Alberta Research Capacity Planning Framework

The overarching objectives of investing in research capacity are to build on existing and emerging strengths, develop and maintain leading-edge research and innovation, and position Alberta to achieve global competitive advantage. Achieving these objectives requires coordinated planning, prioritized research investments, and the sustainable and effective use of resources.

The R&I system's *Roles and Mandates Framework* set the context for the Alberta Research Capacity Planning Framework (ARCPF). The ARCPF is the key means to support basic research capacity in the post-secondary system to bolster broad-based research excellence, primarily by providing the tools and facilities required to conduct basic and applied research and to more effectively leverage resources.

The ARCPF informs the funding of base research capacity in accordance with institutional roles, mandates, and research priorities. It aims to serve the strategic needs of the GOA and R&I system by identifying priority research capacity requirements to which the post-secondary system and relevant entities can respond.

The ARCPF is driven by GOA priorities, inclusive of the goals of Alberta Innovates. The four Alberta Innovates corporations interact with GOA ministries to identify both priority research areas and the capacity needed to bolster targeted R&I activities that are in alignment with GOA strategies. The Alberta Research and Innovation Authority (ARIA) provides the GOA with high-level policy advice on research and innovation, focusing on areas of actual or potential jurisdictional advantage to increase Alberta's competitiveness. The Corporations are responsive to GOA directions, as outlined in existing and emerging GOA strategies and priorities (such as the Health Research and Innovation Strategy, Land-Use Framework, Nanotechnology Strategy, etc.).

The ARCPF integrates research capacity planning into a complementary and cross-referential planning approach in coordination with the CAPF IAP/business plan, and the capital planning process. These separate, but parallel, processes will work together to foster greater integration across the Campus Alberta and Alberta Innovates systems.

ARCPF Timeline - Pilot Phase 2010-11

April 2010	Orientation meetings with IRP contacts.
June 2010	2010 Alberta Research Plan is finalized. 2010 ARCPF is released.
June 2010 - September 2010	AET holds regional meetings with institutions to assist in the development of IRPs.
October 2010 - January 2011	IRPs submitted to AET. IRPs reviewed by AET and feedback provided to institutions.
February 2011	ARCPF process refined and finalized.
March 2011	2011 Alberta Research Plan is released.

The ARCPF process deploys a dual-purpose planning model that both responds to needs for long-term expanded research capacity in government priority areas in support of provincial research and innovation priorities, and responds to research capacity needs in priority areas identified by Alberta's post-secondary institutions.

The ARCPF planning model enables a cyclical process that:

- Transposes GOA strategies into a consolidated research agenda that is made available to post-secondary institutions.
- Identifies research capacity needs within a consolidated plan to differentiate short-, medium-, and long-term needs.
- Enables informed, aligned, and coordinated decision making with an awareness of full costs.
- Improves probability of success in effectively leveraging federal and industry funding.
- Maintains a standard of excellence and peer review.

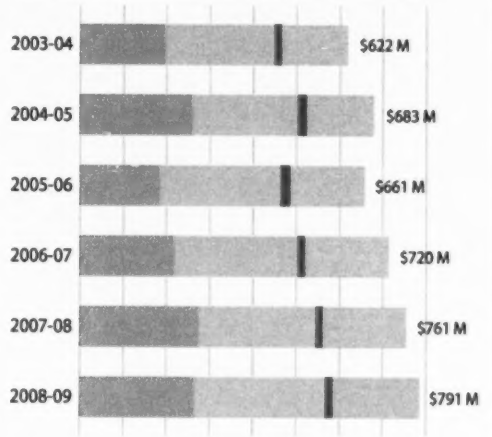
SPONSORED RESEARCH REVENUE

Alberta's post-secondary institutions receive research funding from a variety of sources. Sponsored research revenues are funds garnered outside of institutional operating grants, including contracts, grants, and donations that are used to support the operating and infrastructure costs associated with research.[172]

Comprehensive Academic and Research institutions (CARIs) attract the bulk of sponsored research funding directed to Campus Alberta institutions. From 2003-04 to 2008-09, total sponsored research revenue to the CARI sector increased by 27.0% – an indication of the sector's strength and competitiveness in attracting research funding. Over this period, GOA funding increased by 34.1%, from $202.0 million in 2003-04 to $271.0 million in 2008-09.[173]

While the CARI sector has the mandate to undertake both pure and applied research, all Campus Alberta institutions may engage in applied research.[174] Non-CARI institutions have seen a significant jump in sponsored research revenue over recent years, with an over 100% increase from 2007-08 to 2008-09. This jump in research funding is attributable to substantial investments in research capacity and activity by the provincial and federal governments. In 2008-09, the GOA contributed almost $5.2 million in research funding to non-CARI institutions, which is an increase of over 400% from the previous year and represents the largest research contributor to these institutions.

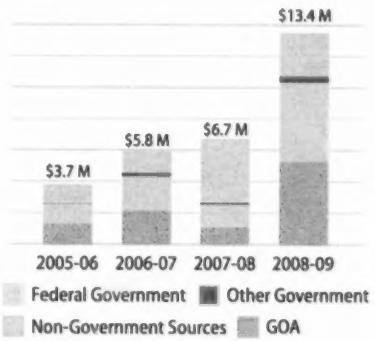
Total Sponsored Research Revenue by Source - CARI Sector



Note: Non-government sources include industry, non-profit, endowment, and other income sources. Data on sponsored research revenue are provided by institutions and are derived from audited financial statements and reports.

Source: Alberta Advanced Education and Technology - Research Capacity Planning Branch

*Total Sponsored Research Revenue by Source - Non-CARI Sectors**



Note: *Does not include Independent Academic Institutions. Non-government sources include industry, non-profit, endowment, and other income sources. Data on sponsored research revenue are provided by institutions and derived from audited financial reports.

Source: Alberta Advanced Education and Technology - Research Capacity Planning Branch

GROSS DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT

Research and Development (R&D) is work that increases our knowledge base. Gross Domestic Expenditure on Research and Development (GERD) is a measure of the spending on R&D within a given geography. GERD looks at the R&D expenditure of four separate sectors – government, business enterprise, higher education, and non-profit organizations – to produce a composite measure. As the depth and breadth of country or province's GERD is affected by its economic strength and demographic characteristics, the measure is typically presented in relation to GDP and/or population in order to produce a measure of a country or province's research intensity. For example, while Alberta has the third highest R&D spending per capita among the provinces at $692 in 2007, the province ranks 8th in terms of its GERD to GDP ratio.[175]

Along with Quebec, Ontario, and British Columbia, Alberta's business enterprise sector is the largest R&D performer at over $1.1 Billion in 2007. This represents 47.5% of Alberta's GERD. In all other provinces, the higher education sector is the top performing sector. In Alberta, the higher education sector is the second largest R&D performer, at over $1.0 Billion (41.8% of GERD) in 2007.[176]

In terms of provincial government spending, Alberta ranked third of the provinces in 2007-08 with a total of $373.9 million in R&D expenditures. Ontario ($595.3 million) and Quebec ($498.1 million) ranked highest.[177] The same year, Alberta had the highest R&D spending of all provinces in the natural sciences and engineering at $138.6 million.

Top Science and Technology (S&T) spending areas for Alberta in 2007-08 were the protection and improvement of human health, the production, distribution, and rational utilization of energy, and the control and care of the environment.[178] In 2008-09, the GOA's S&T expenditures amounted to $622.6 million, a 5.1% increase over 2007-08 ($592.2 million). Preliminary data for the province's 2009-10 S&T spending ($708.1 million) represent a 13.7% increase over 2008-09.[179]

Gross Domestic Expenditure on Research & Development (GERD), 2007

	Population	GDP ($millions)	GERD ($millions)	GERD: GDP Ratio	GERD per Capita ($)
ON	12,718,000	585,723	13,601	2.32	1,069
QC	7,658,000	297,384	7,824	2.63	1,022
CDN	32,739,000	1,532,944	29,170	1.90	891
AB	3,472,000	256,915	2,403	0.94	692
BC	4,275,000	191,598	2,935	1.53	687
NS	937,000	32,933	501	1.52	535
PEI	138,000	4,490	58	1.29	420
MN	1,187,000	48,718	585	1.20	493
SK	994,000	50,811	441	0.87	444
NL	509,000	29,226	262	0.90	468
NB	745,000	26,993	314	1.16	422

Notes: GDP = Gross Domestic Product.
R&D expenditures represent the location of funding distribution. Funding may be sourced from outside the geographic area.
Source: Statistics Canada - Science Statistics, 2009

To create and sustain a vibrant innovation system, a strong pool of R&D personnel – researchers, technicians, and support staff – is required. A priority access area for Alberta, increasing graduate student numbers is integral to the province's success in the knowledge economy. Alberta's graduate students are our future researchers, innovators, and faculty members. In 2007, doctoral students comprised 72% of Canada's researchers in the higher education sector – a total of 47,310 students. About 7% of Canada's R&D personnel worked in Alberta in 2007, ranking fourth after Ontario (45%), Quebec (31%), and British Columbia (10%).[180]

Chapter Summary:

- Over the past year, a number of changes to Alberta's research and innovation system have been implemented in order to streamline activities and increase the ease of navigation. Work on strengthening the ties between Campus Alberta and Alberta Innovates is progressing.
- Alberta's post-secondary institutions have strong research and innovation capacity, attracting significant streams of sponsored research revenue.
- As graduate students are our future professors and researchers, furthering ties between research and graduate studies enrolment will be integral to building Alberta's knowledge and innovation potential.

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APPENDIX A: METHODOLOGICAL NOTES

The CAPF uses a number of data sources from both within and outside government. Methodologies are assessed on an ongoing basis to ensure accuracy and reliability. Data sources referenced in the CAPF are released at various points throughout the year; data provided are the most current available at the time of writing and are valid as of the document's release.

GEOGRAPHIC SERVICE REGIONS

Service regions are defined areas of the province that provide a framework for understanding factors relating to adult learning and post-secondary programming at a regional level.

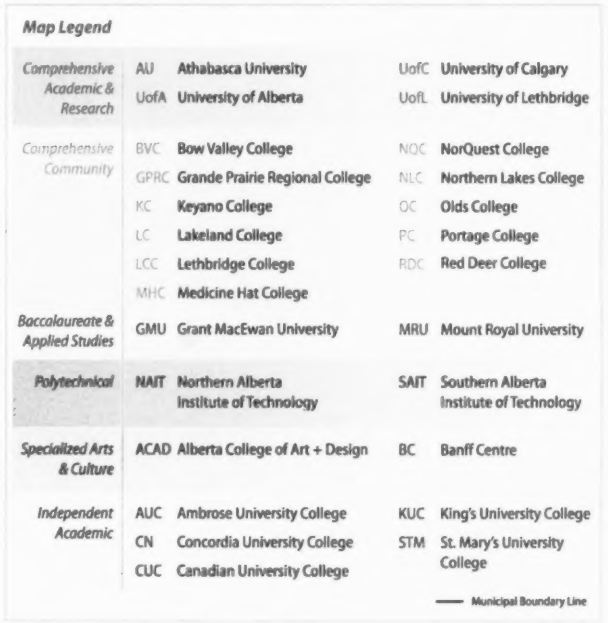
In consultation with system stakeholders, geographic service region boundaries were drawn based on Dissemination Area (DA) boundaries and the area generally served by CCIs.

Where available, data are provided at the service region level to reflect the different environmental contexts and unique regional circumstances that affect learners and learning providers. For example, factors like in-migration, unemployment rates, demographics, and urban/rural mix all vary from one region to the next and can greatly affect the nature of institutional programming and the student services offered.

Service region boundaries for Alberta's CCIs are meant to approximate general service regions and act as guidelines to be considered for planning purposes. CCIs align with service regions in order to enhance strategic planning, achieve access goals, and strengthen partnerships and collaboration. Regional boundaries provide a guide for CCIs in their stewardship role as they move forward engaging communities within their region and in the development of Institutional Access Plans (IAPs).

Due its focus on distance delivery, Athabasca University (AU) is not allocated to any one particular service region.

From the original service regions outlined in the AAPF 2008, consultations resulted in the boundary adjustment and re-naming of the original 11 regions to the current ten. Due to these boundary changes, regional data presented is not directly comparable to those presented in AAPF 2008.



Alberta's Publicly-Funded Post-secondary Institutions 2010

PROGRAM BANDS

Program bands are based on the Classification of Instructional Programs (CIP) 2000 categories. CIP 2000 is designed to classify instructional programs, but is also used for program specializations. Its aim is to provide a sound basis by which to classify programs, supporting the accurate tracking, monitoring, and evaluation of programs and completions. Designed by the US Department of Education's National Centre for Education Statistics in 1980, CIP 2000 is the third revision of the original categorization.

Program bands are designed to enhance the ease of data analysis and the communication and presentation of data by categorizing CIP 2000 into nine higher-level groupings.

Data provided at the CIP code or program band level may not reconcile with those presented in previous iterations. A review of CIP code program dimensions resulted in the revision of many public college and technical institutes' programs/specializations CIP codes to more accurately reflect academic content. Program attributes for each program and year the program was offered now reflect values currently listed in the Program Registry System (PRS) for that year and program.

Dialogue between the department and system stakeholders is ongoing in order to ensure the accurate categorization of CIP codes into program bands.

Program Bands: Higher Level Groupings for CIP 2000

Program Band	Two-Digit CIP Code
Business/Management	Business, Management, Marketing & Related Support Services
Education	Education
Health Sciences	Psychology
	Health Professions & Related Clinical Sciences
	Dental, Medical & Veterinary Residency Programs
Languages, Social Sciences, Arts & Humanities	Aboriginal & Foreign Languages, Literatures & Linguistics
	English Language & Literatures &Letters
	French Language & Literature & Letters
	Philosophy & Religious Studies
	History
	Social Sciences
	Library Science
	Public Administration & Social Science Profession
	Family & Consumer Science/Human Sciences
	Area, Ethnic, Cultural & Gender Studies
	Communication, Journalism & Related Programs
	Theology & Religious Vocations
	Liberal Arts, General Studies & Humanities
	Visual & Performing Arts
Legal & Security	Security & Protective Services
	Legal Profession & Studies
Recreation	Personal Awareness & Self improvement
	Parks, Recreation, Leisure & Fitness Studies
	Leisure & Recreational Activities
Physical, Natural & Applied Sciences	Biological & Biomedical Sciences
	Agricultural, Agricultural Operations & Related Sciences
	Physical Sciences
	Mathematics & Statistics
	Engineering
	Natural Resources & Conservation
	Multi/Interdisciplinary Studies
	Military Technologies
	Architecture & Related Sciences
	Computer & Information Sciences & Support Services
	Communication Technologies/Technicians & Support Services
Preparatory & Basic Upgrading	Basic Skills
	High School/Secondary Diplomas & Certificate Programs
	Technology Education/Industrial Arts
Trades & Technology	Construction Trades
	Mechanic & Repair Technologists/Technicians
	Precision Production
	Transportation & Materials Moving
	Engineering Technologies/Technicians
	Science Technologies/Technicians
	Personal & Culinary Services

POPULATION PROJECTIONS

At the Alberta level, population data are sourced from Alberta Finance and Enterprise based on data from Statistics Canada's 2006 Census of Population and post-censal estimates of Alberta's population on July 1st, 2009. Only the permanent population is used; non-permanent residents (e.g., the shadow population) are not counted as their primary place of residence is located outside the province. Statistics Canada therefore counts these individuals in the Census as permanent residents of other jurisdictions.

Alberta is composed of 19 CDs, each containing a number of smaller DAs. Each DA contains a similar number of people. Data is available by DA for census years, and by CD for non-census years. Alberta Finance and Enterprise calculates population forecasts by CD using a low-, medium-, and high-growth scenario. Data presented here are sourced from the medium-growth scenario, which represents the most likely case. Starting with the base population by age year and sex, fertility, mortality, and migration rates are applied to project the number of births, deaths, and migrants per year. Provincial-level population projections are derived by summing the CD-level projections.[181]

Population forecasts by service region are derived separately from the provincial forecast. Unlike Census Divisions, Dissemination Areas fit neatly into geographic service region boundaries. Since DA level data is only available in non-census years, each CD is weighted according to the proportion of its population falling in a particular service region and matched to the DAs within that region.

For example, the Medicine Hat Region includes parts of three Census Divisions (100% of CD1, 16% of CD2, and 34% of CD3). To derive the Medicine Hat Region's population from these three CDs, the population of CD1 is multiplied by 1 because it contains 100% of that CD. The population of CD2 is multiplied by 0.16, and the population of CD3 by 0.34. The three derived figures are then summed to determine the overall regional population. These calculations are then forecasted forward using Statistics Canada's medium-term growth scenario.

Alberta Finance's 2010 set of population projections for Alberta and Census Divisions used a different methodology than the previous year's.

The 2009 projection forecast used a ratio-based forecasting method, whereby the 2010 forecasts uses a component-based method. The ratio-based method compares population levels and trends for a given CD to the province's to derive a ratio, and uses that ratio to project the population forward. This method is premised on the assumption that there is a degree of stability in the population trends. The component method uses estimates of births, deaths, and net migration to update population figures. The various components of anticipated population change projected separately and then applied to produce a series of population data.

The change in forecasting methodology may account for variance in the population projections at the provincial and service region levels between the 2009 and 2010 forecasts.

HEADCOUNT ENROLMENT – NEW METHODOLOGY

The unduplicated (unique) student headcount measure is a method of counting enrolment that refers to the actual number of students registered at and attending a publicly-funded post-secondary institution in Alberta (full- and part-time) in a given academic year.

Previously, the methodology for determining the number of unduplicated student headcounts was based on institution-specific student identification (ID) numbers. As there are students attending more than one institution at a time, this method of counting overstated the total unduplicated headcount number at a sector or system level, since students attending multiple institutions were counted more than once as part of the system total. This method resulted in over-reporting of the number of unduplicated student headcounts reported at the system level by about 10,000 students per year.

To address this issue of double counting, the unduplicated student headcount methodology has been modified to use the ASN, rather than the institutional student ID, as the means of student identification. For the past decade, institutions have used the ASN to report enrolment data to AET via LERS. Every student in Alberta should be assigned a unique ASN that travels with them, regardless of the post-secondary institution they attend through the course of their life. As a unique identifier that travels with the learner, the ASN enables analyses that identify duplicate student counts among institutions.

In some cases, students are not assigned an ASN. For those student records without an ASN, institution-specific values were used.

Because the methodology has been updated to reduce instances of double counting, subtotals and system values for this measure will not be equal to the sum of the corresponding institutional totals, as a student may have attended more than one institution; in other words, one will not be able to "add" up institutional totals to arrive at a summary value, as adding each institutional total may lead to double counting. The values listed for each institution represent unique headcounts at that particular institution, while the value listed for the system total represent the number of unique headcounts across the whole system.

For the 2004-05 academic year onward, the unduplicated headcount values have been updated based on the new methodology, so that students attending more than one institution will only be counted once at the system level.

APPENDIX B: DATA TABLES

TABLE B.1 HISTORICAL APPLICANTS

	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009
Comprehensive Academic & Research Institutions	**103,547**	**107,452**	**111,214**	**73,240**	**75,829**
Athabasca University*	50,909	53,351	55,714	17,458	16,905
University of Alberta	31,450	32,261	33,237	32,581	33,097
University of Calgary	22,078	22,891	23,455	23,361	25,878
University of Lethbridge	6,090	5,982	6,286	5,902	6,102
Baccalaureate & Applied Studies Institutions	**24,050**	**24,932**	**24,784**	**25,281**	**27,905**
Grant MacEwan University	13,754	13,758	13,051	13,174	14,652
Mount Royal University	10,663	11,556	12,035	12,403	13,551
Polytechnical Institutions	**19,019**	**21,200**	**25,611**	**25,704**	**26,910**
Northern Alberta Institute of Technology	6,933	9,760	13,375	13,451	13,905
Southern Alberta Institute of Technology	12,712	12,074	12,882	12,940	13,641
Comprehensive Community Institutions	**23,516**	**23,770**	**23,389**	**25,251**	**29,491**
Bow Valley College	4,096	4,003	3,932	3,317	4,360
Grande Prairie Regional College	1,762	1,670	1,646	1,287	2,769
Keyano College	1,145	914	572	1,026	1,032
Lakeland College	2,163	1,774	1,586	1,986	1,972
Lethbridge College	2,465	3,616	3,679	3,629	3,819
Medicine Hat College	2,297	2,296	2,282	2,539	2,648
NorQuest College	1,277	1,749	1,711	3,203	3,546
Northern Lakes College	1,469	1,211	1,359	1,442	1,485
Olds College	1,195	1,449	1,409	1,625	1,599
Portage College	1,956	1,666	1,557	1,613	1,989
Red Deer College	4,608	4,284	4,506	4,554	5,331
Independent Academic Institutions	**3,013**	**2,671**	**2,931**	**2,886**	**2,840**
Alliance University College	103	48	n/a	n/a	n/a
Ambrose University College	n/a	n/a	215	235	296
Canadian Nazarene University College	68	67	0	0	0
Canadian University College	205	229	328	422	240
Concordia University College of Alberta	1,775	1,517	1,497	1,360	1,422
King's University College	459	436	495	571	587
St. Mary's University College	323	327	361	248	366
Taylor University College & Seminary**	160	110	99	112	n/a
Specialized Arts & Culture Institutions	**748**	**801**	**754**	**802**	**1,000**
Alberta College of Art & Design	748	801	754	802	1,000
TOTAL	**160,165**	**166,778**	**174,456**	**139,786**	**149,537**

Notes: *Prior to 2008, AU reported all applicants at the course level. From 2008 onward, AU reports new applicants or those applying to a new program.
**As of June 30, 2009, Taylor University College and Seminary ceased offering undergraduate programs and was renamed Taylor College and Seminary.
Summing the institutional rows will not equal the system total, as students may have applied to more than one institution.
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
Data for the Banff Centre are unavailable, as they do not report via ASI.
In 2008 NorQuest updated their process to include applications/applicants for programs that were excluded in previous years.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.

Source: Alberta Advanced Education and Technology, Applicant Submission Initiative (ASI)

TABLE B.2 HISTORICAL ENROLMENT (FLE)

	2004-05	2005-06	2006-07	2007-08	2008-09
Comprehensive Academic & Research Institutions	**68,058.9**	**69,170.9**	**70,514.3**	**70,469.1**	**71,442.3**
Athabasca University	6,464.9	6,742.5	7,183.7	7,193.3	7,525.9
University of Alberta	31,326.4	32,264.2	32,337.6	32,683.9	32,844.0
University of Calgary	23,446.3	23,190.4	24,044.4	23,654.3	24,383.7
University of Lethbridge	6,823.4	6,973.9	6,948.7	6,937.6	6,688.7
Baccalaureate & Applied Studies Institutions	**18,404.0**	**18,154.8**	**17,835.9**	**18,082.0**	**19,176.9**
Grant MacEwan University	10,534.3	10,346.6	10,338.9	10,204.7	10,220.9
Mount Royal University	7,869.7	7,808.2	7,497.1	7,877.3	8,956.0
Polytechnical Institutions	**21,602.7**	**22,337.5**	**23,861.2**	**24,589.3**	**25,401.3**
Northern Alberta Institute of Technology	11,336.8	11,621.3	12,273.7	12,979.7	13,582.9
Southern Alberta Institute of Technology	10,265.9	10,716.2	11,587.5	11,609.6	11,818.5
Comprehensive Community Institutions	**26,075.6**	**25,953.3**	**24,501.9**	**25,140.8**	**26,591.6**
Bow Valley College	3,913.4	3,941.2	3,456.8	3,590.6	3,825.0
Grande Prairie Regional College	1,386.5	1,347.2	1,262.4	1,251.1	1,289.8
Keyano College	1,322.0	1,282.8	1,223.4	1,290.2	1,212.4
Lakeland College	2,057.8	1,938.1	1,778.2	1,928.0	2,051.1
Lethbridge College	4,103.8	3,954.4	3,726.3	3,669.1	3,815.2
Medicine Hat College	2,456.1	2,415.1	2,365.7	2,347.1	2,312.6
NorQuest College	4,055.7	4,196.5	4,022.8	4,365.2	5,084.4
Northern Lakes College	759.0	863.5	777.9	860.4	1,020.2
Olds College	1,304.4	1,304.9	1,309.0	1,274.9	1,270.9
Portage College	1,050.0	1,069.0	979.5	910.8	979.6
Red Deer College	3,666.9	3,639.9	3,600.1	3,653.2	3,730.2
Independent Academic Institutions	**3,292.8**	**3,305.2**	**3,025.3**	**2,976.4**	**2,842.8**
Alliance University College	222.2	189.1	124.3	n/a	n/a
Ambrose University College	n/a	n/a	n/a	316.8	303.4
Canadian Nazarene University College	168.1	178.3	192.3	n/a	n/a
Canadian University College	371.2	353.8	314.3	287.0	284.7
Concordia University College of Alberta	1,521.8	1,526.0	1,431.3	1,424.2	1,297.8
King's University College	546.8	518.9	472.8	472.4	504.3
St. Mary's University College	268.0	325.2	348.1	347.4	337.2
Taylor University College & Seminary	194.7	213.9	142.4	128.6	115.2
Specialized Arts & Culture Institutions	**1,275.5**	**1,287.4**	**1,317.6**	**1,312.6**	**1,354.1**
Alberta College of Art & Design	938.1	943.0	962.8	971.9	985.0
Banff Centre	337.4	344.4	354.8	340.7	369.1
TOTAL	**138,709.5**	**140,209.1**	**141,056.3**	**142,570.1**	**146,808.9**

Notes: NAIT assumed responsibility for Fairview College on July 1, 2004.
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2008-09 was the first year that Mount Royal reported enrolments in English-language training and academic upgrading.

Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS), Banff Centre Enrolment Report

TABLE B.3 HISTORICAL ENROLMENT (HEADCOUNT)

	2004-05	2005-06	2006-07	2007-08	2008-09
Comprehensive Academic & Research Institutions	**108,171**	**111,042**	**114,865**	**115,272**	**116,287**
Athabasca University	32,034	34,187	37,219	37,876	38,543
University of Alberta	39,090	39,856	40,094	40,364	40,245
University of Calgary	30,851	30,659	30,905	30,510	30,761
University of Lethbridge	9,131	9,352	9,385	9,232	8,771
Baccalaureate & Applied Studies Institutions	**30,430**	**29,830**	**29,129**	**29,484**	**32,836**
Grant MacEwan University	17,689	17,283	17,080	16,833	17,671
Mount Royal University	12,773	12,558	12,060	12,674	15,187
Polytechnical Institutions	**46,541**	**49,757**	**55,162**	**56,911**	**58,005**
Northern Alberta Institute of Technology	23,394	24,288	26,549	28,345	29,455
Southern Alberta Institute of Technology	23,205	25,542	28,682	28,655	28,632
Comprehensive Community Institutions	**54,090**	**55,255**	**52,870**	**53,247**	**53,904**
Bow Valley College	10,249	10,980	8,264	8,111	8,228
Grande Prairie Regional College	2,278	2,345	2,229	2,298	2,249
Keyano College	2,380	2,401	2,446	2,537	2,658
Lakeland College	7,591	7,407	6,862	8,067	7,713
Lethbridge College	7,259	6,797	6,349	6,311	6,434
Medicine Hat College	5,473	5,714	5,751	5,570	5,255
NorQuest College	7,381	7,354	7,483	6,692	7,408
Northern Lakes College	1,164	1,354	1,401	1,565	1,734
Olds College	2,004	2,537	3,468	3,127	2,761
Portage College	2,748	2,842	2,808	2,773	3,062
Red Deer College	6,415	6,572	6,770	7,059	7,269
Independent Academic Institutions	**4,737**	**4,681**	**4,386**	**4,270**	**4,034**
Alliance University College	426	464	452	n/a	n/a
Ambrose University College	n/a	n/a	n/a	505	477
Canadian Nazarene University College	392	444	476	n/a	n/a
Canadian University College	508	478	453	426	440
Concordia University College of Alberta	2,178	2,163	2,032	1,949	1,787
King's University College	706	662	634	650	678
St. Mary's University College	485	511	578	556	509
Taylor University College & Seminary	267	282	213	203	158
Specialized Arts & Culture Institutions	**4,258**	**4,810**	**4,703**	**5,098**	**5,421**
Alberta College of Art & Design	1,345	1,316	1,268	1,316	1,324
Banff Centre	2,913	3,494	3,435	3,782	4,097
TOTAL	**240,749**	**248,075**	**254,458**	**257,653**	**264,291**

Notes: NAIT assumed responsibility for Fairview College on July 1, 2004. Data for Fairview College are included in the Northern Alberta Institute of Technology (NAIT) from 2004-05 onward.
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
In 2008-09, a new methodology for counting unduplicated headcounts was introduced focusing on the Alberta Student Number (ASN), greatly reducing the incidence of double counting - values listed will not match those previously reported.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2008-09 was the first year that Mount Royal reported enrolments in English-language training and academic upgrading.

Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS), Banff Centre Enrolment Report

TABLE B.4 NON-CREDIT ENROLMENT (HEADCOUNT)

2008-09	# Course Registrations	Unique Students by Program	Unique Students by Institution
Comprehensive Academic & Research Institutions*	**78,421**	**53,619**	**53,348**
University of Alberta	14,939	9,555	9,284
University of Calgary	46,951	27,533	27,533
University of Lethbridge	16,531	16,531	16,531
Baccalaureate & Applied Studies Institutions	**65,335**	**43,768**	**38,858**
Grant MacEwan University	18,887	18,887	16,773
Mount Royal University	46,448	24,881	22,085
Polytechnical Institutions	**62,792**	**33,558**	**31,645**
Northern Alberta Institute of Technology	35,731	15,113	14,043
Southern Alberta Institute of Technology	27,061	18,445	17,602
Comprehensive Community Institutions	**94,093**	**70,409**	**66,209**
Bow Valley College	6,243	3,999	3,999
Grande Prairie Regional College	15,912	14,028	13,913
Keyano College	25,319	15,858	14,348
Lakeland College	1,038	791	768
Lethbridge College	10,726	8,719	8,719
Medicine Hat College	5,982	4,426	4,011
NorQuest College	2,149	1,681	1,619
Northern Lakes College	8,519	6,482	4,407
Olds College	2,553	1,991	1,991
Portage College	2,434	757	757
Red Deer College	13,218	11,677**	11,677
Independent Academic Institutions	**4,255**	**1,281**	**1,297**
Ambrose University College	1,955	475	475
Canadian University College	320	280	280
Concordia University College of Alberta	386	209	209
King's University College	155	91	91
St. Mary's University College	96	62	78
Taylor University College & Seminary	1,343	164	164
Specialized Arts & Culture Institutions	**1,901**	**1,446**	**1,446**
Alberta College of Art & Design	1,901	1,446	1,446
TOTAL	**306,797**	**204,081**	**192,803**

Notes: *Non-credit programs are not offered at Athabasca University.
**Unique student information by program is currently unavailable from Red Deer College; therefore, it is assumed that values by program and institution are the same.
Student numbers are specific to the institution; students attending more than one institution would be counted multiple times in the sector and system totals.
Programs/courses offered by Alberta's publicly-funded post-secondary institutions that do not lead to a Ministerial approved parchment are considered non-credit.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
Data from the Banff Centre are not available.

Source: Alberta Advanced Education and Technology, Key Performance Indicator Reporting System (KPIRS)

TABLE B.5 HISTORICAL ABORIGINAL ENROLMENT (HEADCOUNT)

	2006-07		2007-08		2008-09	
	Aboriginal Enrolment	% of Total Enrolment	Aboriginal Enrolment	% of Total Enrolment	Aboriginal Enrolment	% of Total Enrolment
Comprehensive Academic & Research Institutions	**2,838**	**2.5%**	**2,822**	**2.4%**	**3,027**	**2.6%**
Athabasca University	877	2.4%	906	2.4%	991	2.6%
University of Alberta	1,169	2.9%	1,118	2.8%	1,197	3.0%
University of Calgary	346	1.1%	358	1.2%	433	1.4%
University of Lethbridge	490	5.2%	483	5.2%	443	5.1%
Baccalaureate & Applied Studies Institutions	**751**	**2.6%**	**776**	**2.6%**	**1,018**	**3.1%**
Grant MacEwan University	403	2.4%	400	2.4%	561	3.2%
Mount Royal University	348	2.9%	376	3.0%	457	3.0%
Polytechnical Institutions	**304**	**0.6%**	**262**	**0.5%**	**295**	**0.5%**
Northern Alberta Institute of Technology	155	0.6%	147	0.5%	195	0.7%
Southern Alberta Institute of Technology	149	0.5%	115	0.4%	100	0.3%
Comprehensive Community Institutions	**3,592**	**6.8%**	**3,613**	**6.8%**	**3,989**	**7.4%**
Bow Valley College	90	1.1%	116	1.4%	148	1.8%
Grande Prairie Regional College	167	7.5%	277	12.1%	304	13.5%
Keyano College	383	15.7%	369	14.5%	312	11.7%
Lakeland College	160	2.3%	177	2.2%	273	3.5%
Lethbridge College	402	6.3%	349	5.5%	326	5.1%
Medicine Hat College	140	2.4%	131	2.4%	28	0.5%
NorQuest College	690	9.2%	656	9.8%	796	10.7%
Northern Lakes College	503	35.9%	660	42.2%	730	42.1%
Olds College	26	0.7%	33	1.1%	71	2.6%
Portage College	973	34.7%	782	28.2%	940	30.7%
Red Deer College	90	1.3%	103	1.5%	104	1.4%
Independent Academic Institutions	**82**	**1.9%**	**90**	**2.1%**	**88**	**2.2%**
Alliance University College	–	–	n/a	n/a	n/a	n/a
Ambrose University College	n/a	n/a	–	–	–	–
Canadian Nazarene University College	–	–	n/a	n/a	n/a	n/a
Canadian University College	–	–	7	1.6%	10	2.3%
Concordia University College of Alberta	74	3.6%	71	3.6%	64	3.6%
King's University College	–	–	9	1.4%	14	2.1%
St. Mary's University College	–	–	–	–	–	–
Taylor University College & Seminary	–	–	–	–	–	–
Specialized Arts & Culture Institutions	**29**	**2.3%**	**29**	**2.2%**	**34**	**2.6%**
Alberta College of Art & Design	29	2.3%	29	2.2%	34	2.6%
TOTAL	**7,515**	**3.0%**	**7,511**	**3.0%**	**8,355**	**3.2%**

Notes: Aboriginal students self-identify via a check box on post-secondary application forms. Data may underestimate the actual number of Aboriginal learners.
In 2008-09, a new methodology for counting unduplicated headcounts was introduced focusing on the Alberta Student Number (ASN), greatly reducing the incidence of double counting - values listed will not match those previously reported.
Values less than 5 have been suppressed and are indicated by (–). Data from the Banff Centre are not available, as they do not report via LERS.
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2008-09 was the first year that Mount Royal reported enrolments in English-language training and academic upgrading.

Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS)

TABLE B.6 HISTORICAL VISA STUDENT ENROLMENT (HEADCOUNT)

	2006-07		2007-08		2008-09	
	Visa Enrolment	% of Total Enrolment	Visa Enrolment	% of Total Enrolment	Visa Enrolment	% of Total Enrolment
Comprehensive Academic & Research Institutions	**5,501**	**6.9%**	**6,051**	**7.6%**	**6,701**	**8.4%**
University of Alberta	2,968	7.4%	3,359	8.3%	3,794	9.4%
University of Calgary	1,782	5.8%	1,999	6.6%	2,328	7.6%
University of Lethbridge	764	8.1%	706	7.6%	584	6.7%
Baccalaureate & Applied Studies Institutions	**813**	**2.8%**	**721**	**2.4%**	**1,581**	**4.8%**
Grant MacEwan University	509	3.0%	369	2.2%	642	3.6%
Mount Royal University	305	2.5%	352	2.8%	939	6.2%
Polytechnical Institutions	**1,761**	**3.2%**	**1,689**	**3.0%**	**1,902**	**3.3%**
Northern Alberta Institute of Technology	1,179	4.4%	1,108	3.9%	1,142	3.9%
Southern Alberta Institute of Technology	584	2.0%	584	2.0%	761	2.7%
Comprehensive Community Institutions	**1,217**	**2.3%**	**1,177**	**2.2%**	**1,514**	**2.8%**
Bow Valley College	404	4.9%	410	5.1%	397	4.8%
Grande Prairie Regional College	51	2.3%	47	2.0%	58	2.6%
Keyano College	24	1.0%	25	1.0%	23	0.9%
Lakeland College	–	–	–	–	6	0.1%
Lethbridge College	208	3.3%	217	3.4%	197	3.1%
Medicine Hat College	204	3.5%	197	3.5%	207	3.9%
NorQuest College	54	0.7%	112	1.7%	495	6.7%
Northern Lakes College	–	–	–	–	–	–
Olds College	218	6.3%	104	3.3%	75	2.7%
Portage College	–	–	–	–	–	–
Red Deer College	62	0.9%	61	0.9%	55	0.8%
Independent Academic Institutions	**197**	**4.5%**	**190**	**4.4%**	**203**	**5.0%**
Alliance University College	–	–	n/a	n/a	n/a	n/a
Ambrose University College	n/a	n/a	10	2.0%	17	3.6%
Canadian Nazarene University College	–	–	n/a	n/a	n/a	n/a
Canadian University College	76	16.8%	75	17.6%	76	17.3%
Concordia University College of Alberta	62	3.1%	52	2.7%	49	2.7%
King's University College	50	7.9%	41	6.3%	44	6.5%
St. Mary's University College	10	1.7%	11	2.0%	5	1.0%
Taylor University College & Seminary	–	–	–	–	12	7.6%
Specialized Arts & Culture Institutions	**71**	**5.6%**	**80**	**6.1%**	**72**	**5.4%**
Alberta College of Art & Design	71	5.6%	80	6.1%	72	5.4%
TOTAL	**9,430**	**4.3%**	**9,804**	**4.4%**	**11,840**	**5.2%**

Notes: Values less than 5 have been suppress and are indicated by (–). Suppressed values are indicated in the total row where applicable.
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
Data from the Banff Centre are not available, as they do not report via LERS.
In 2008-09, a new methodology for counting unduplicated headcounts was introduced focusing on the Alberta Student Number (ASN), greatly reducing the incidence of double counting - values listed will not match those previously reported.
Athabasca University (AU) enrolments are not included. Since AU is not a campus-based institution, its international students tend to be distance learners and do not need a visa.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.
2008-09 was the first year that Mount Royal reported enrolments in English-language training and academic upgrading.

Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS)

TABLE B.7 HISTORICAL GRADUATES OF PARCHMENT PROGRAMS*

	2004-05	2005-06	2006-07	2007-08	2008-09
Comprehensive Academic & Research Institutions	**16,660**	**17,414**	**17,242**	**17,742**	**17,184**
Athabasca University	1,278	1,810	1,545	1,656	1,587
University of Alberta	7,642	8,113	8,338	8,445	8,152
University of Calgary	6,066	5,868	5,751	5,789	5,659
University of Lethbridge	1,709	1,685	1,745	1,951	1,787
Baccalaureate & Applied Studies Institutions	**3,231**	**4,144**	**2,783**	**2,506**	**3,496**
Grant MacEwan University	1,953	2,040	1,787	1,601	2,416
Mount Royal University	1,278	2,104	996	905	1,080
Polytechnical Institutions	**7,704**	**6,609**	**6,852**	**7,546**	**7,188**
Northern Alberta Institute of Technology	3,723	3,209	3,396	3,720	3,886
Southern Alberta Institute of Technology	3,981	3,400	3,456	3,826	3,303
Comprehensive Community Institutions	**6,428**	**6,308**	**6,252**	**5,799**	**6,384**
Bow Valley College	879	807	682	555	689
Grande Prairie Regional College	256	243	274	189	201
Keyano College	433	359	279	399	302
Lakeland College	725	793	674	734	861
Lethbridge College	982	886	985	907	952
Medicine Hat College	341	365	376	363	313
NorQuest College	1,025	1,238	1,185	977	1,370
Northern Lakes College	176	112	163	171	251
Olds College	567	556	611	636	561
Portage College	375	329	411	256	304
Red Deer College	671	621	613	615	581
Independent Academic Institutions	**572**	**679**	**685**	**655**	**642**
Alliance University College	–	8	14	n/a	n/a
Ambrose University College	n/a	n/a	n/a	57	53
Canadian Nazarene University College	22	37	35	n/a	n/a
Canadian University College	72	94	78	61	62
Concordia University College of Alberta	311	348	344	352	339
King's University College	131	128	135	119	110
St. Mary's University College	–	14	29	37	44
Taylor University College & Seminary	29	50	50	29	34
Specialized Arts & Culture Institutions	**177**	**196**	**199**	**209**	**193**
Alberta College of Art & Design	177	196	199	209	193
TOTAL	**34,719**	**35,297**	**33,967**	**34,428**	**35,038**

Notes: * Values represent unique graduates; therefore, summing the rows will not equal the total listed. Values less than 5 have been suppressed and are indicated by (–).
In 2008-09, a new methodology for counting unduplicated headcounts was introduced focusing on the Alberta Student Number (ASN), greatly reducing the incidence of double counting - values listed will not match those previously reported.
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
Data from the Banff Centre are not available, as they do not report via LERS.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.

Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS)

TABLE B.8 HISTORICAL PARCHMENTS AWARDED

	2004-05	2005-06	2006-07	2007-08	2008-09
Comprehensive Academic & Research Institutions	**17,211**	**18,020**	**17,903**	**18,389**	**17,642**
Athabasca University	1,291	1,839	1,562	1,656	1,590
University of Alberta	7,754	8,235	8,488	8,580	8,240
University of Calgary	6,286	6,097	5,973	6,019	5,852
University of Lethbridge	1,880	1,849	1,880	2,134	1,960
Baccalaureate & Applied Studies Institutions	**3,240**	**4,190**	**2,789**	**2,514**	**3,525**
Grant MacEwan University	1,957	2,044	1,793	1,602	2,428
Mount Royal University	1,283	2,146	996	912	1,097
Polytechnical Institutions	**7,716**	**6,624**	**6,867**	**7,561**	**7,202**
Northern Alberta Institute of Technology	3,734	3,219	3,406	3,730	3,895
Southern Alberta Institute of Technology	3,982	3,405	3,461	3,831	3,307
Comprehensive Community Institutions	**6,510**	**6,403**	**6,354**	**5,939**	**6,541**
Bow Valley College	881	807	686	557	691
Grande Prairie Regional College	260	245	276	193	220
Keyano College	438	366	285	426	304
Lakeland College	739	817	685	743	866
Lethbridge College	1,002	887	999	910	954
Medicine Hat College	346	365	376	370	314
NorQuest College	1,031	1,238	1,185	977	1,370
Northern Lakes College	176	112	163	174	251
Olds College	568	574	611	637	561
Portage College	393	366	468	326	422
Red Deer College	676	626	620	626	588
Independent Academic Institutions	**575**	**681**	**688**	**655**	**643**
Alliance University College	–	8	14	n/a	n/a
Ambrose University College	n/a	n/a	n/a	57	53
Canadian Nazarene University College	22	37	35	n/a	n/a
Canadian University College	75	96	79	61	62
Concordia University College of Alberta	311	348	346	352	340
King's University College	131	128	135	119	110
St. Mary's University College	–	14	29	37	44
Taylor University College & Seminary	29	50	50	29	34
Specialized Arts & Culture Institutions	**177**	**196**	**199**	**209**	**193**
Alberta College of Art & Design	177	196	199	209	193
TOTAL	**35,429**	**36,114**	**34,800**	**35,267**	**35,746**

Notes: Values less than 5 have been suppressed and are indicated by (--).
In 2007, Alliance University College merged with Canadian Nazarene University College to become Ambrose University College.
Data from the Banff Centre are not available, as they do not report via LERS.
In 2009, the Lieutenant Governor in Council changed the name of Grant MacEwan College and Mount Royal College to Grant MacEwan University and Mount Royal University.

Source: Alberta Advanced Education and Technology, Learner and Enrolment Reporting System (LERS)

GLOSSARY

Aboriginal Identity	Those individuals who reported identifying with at least one Aboriginal group (North American Indian, Métis, or Inuit), and/or those who reported being a Treaty Indian or a Registered Indian as defined by the Indian Act of Canada, and/or those who reported that they were members of an Indian band or First Nation.
Applicant	An individual who applies to a program at a publicly-funded post-secondary institution in Alberta.
Application	A request for acceptance into a program in a publicly-funded post-secondary institution in Alberta.
Apprenticeship	A structured system of supervised training leading to certification in a designated trade, occupation, or craft. Programs involve a combination of on-the-job training and technical instruction, whereby\ an apprentice gains experiential learning and develops skills.
Block Transfer	A group of courses, such as a completed certificate or diploma program, that are accepted for transfer credit into a degree program.
CIP 2000	Classification of Instructional Programs (CIP) 2000 is a system of grouping instructional programs of study into higher-level categories for ease of use in data processing and information gathering.
Credential	A qualification resulting in the completion of a parchment program.
Full-Load Equivalent (FLE)	A measure of enrolment in which one FLE represents one student for a year of study (typically September through April) taking a full course load.
Full-time Student	An active student who is registered in the program for at least 60% of the Full Load of the program for the academic year in at least one session.
Geographic Service Region	Based primarily on county division boundaries, one of ten areas of the province generally served by a Comprehensive Community Institution (CCI).
International Student	A student, in possession of a study visa, legally entitled to attend a publicly-funded post-secondary institution in Alberta.
Parchment	The credential awarded to students who complete a program.
Part-time Student	An active student who is registered in the program for less than 60% of the Full Load of the program for the academic year for all enrolled sessions.
Program Band	One of nine high-level program groupings based on CIP 2000 categories designed to enhance the ease of data analysis and the communication and presentation of data.
Program Completer (Graduate)	Measured by the number of parchments awarded, a student who has been determined by his/her institution to have completed all program (graduation) requirements of a ministerial approved program and to whom the institution confers a parchment where a parchment is offered.
Sector	One of six categories of publicly-funded post-secondary institutions in Alberta as defined in legislation: (1) Comprehensive Academic & Research Institutions, (2) Baccalaureate & Applied Studies Institutions, (3) Comprehensive Community Institutions, (4) Polytechnical Institutions, (5) Independent Academic Institutions, and (6) Specialized Arts & Culture Institutions.
Turn-Away	An applicant that met the minimum qualifications in at least one of his/her applications but was not offered admission to any program to which they applied and is not attending a publicly-funded program at a post-secondary institution anywhere in Alberta.
Unduplicated Graduate Headcount	An individual determined by his/her institution to have completed all program (graduation) requirements of a ministerial approved program and to whom the institution confers a parchment where a parchment is offered. Students receiving multiple parchments would be counted once as this measure focuses on the number of unique students.
Unduplicated Student Headcount	A measure of enrolment referring the number of individual students registered at and attending a publicly-funded post-secondary institution in Alberta (full- and part-time, at any level).

ENDNOTES

[1] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
[2] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
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[13] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
[14] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
[15] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
[16] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
[17] Alberta Finance and Enterprise (2010). *Alberta Population Projections by Census Division, 2010-2050.* http://www.finance.alberta.ca/aboutalberta/demographics.html.
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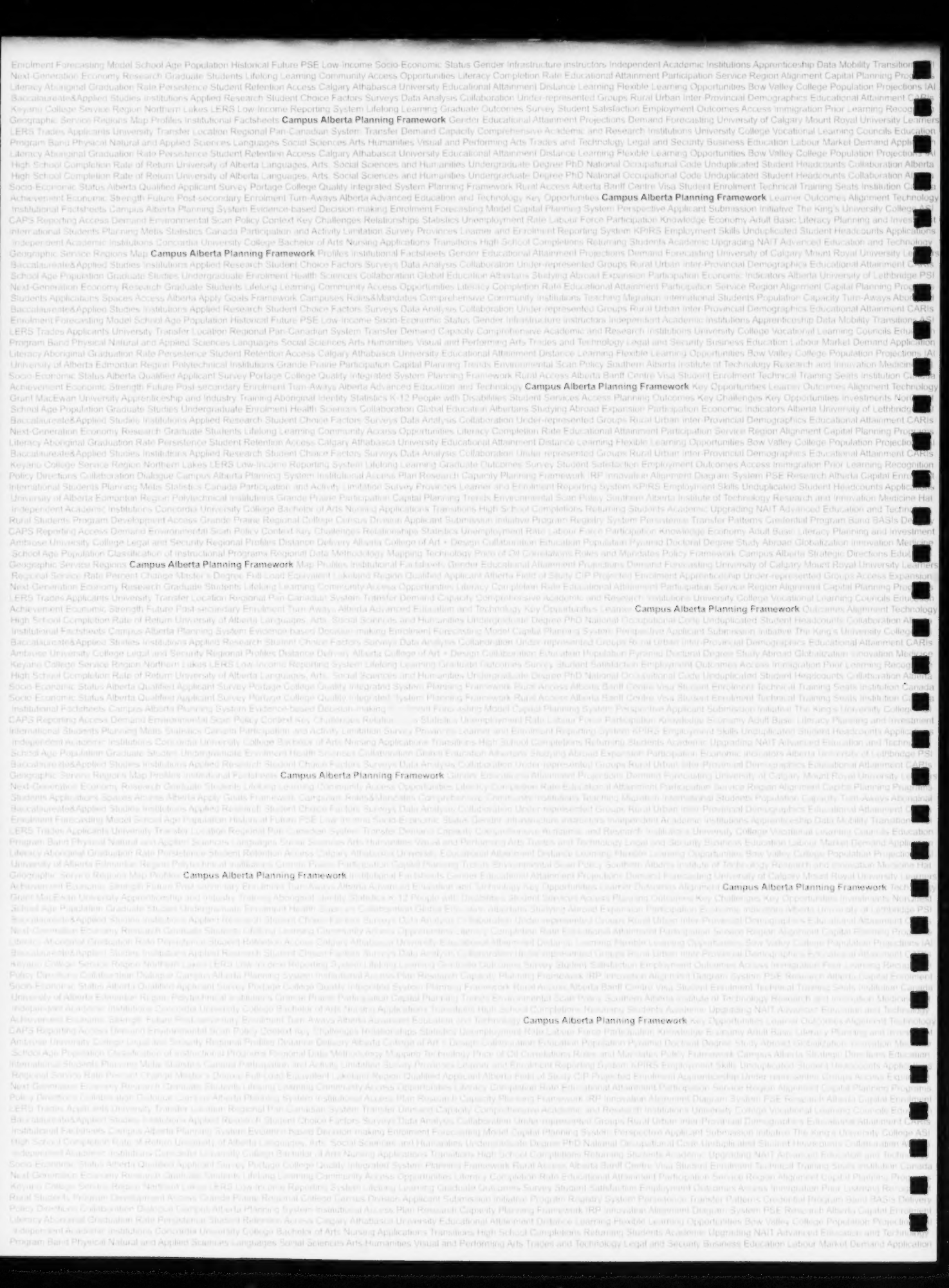
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